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THE
**YOUNG GARDENER'S
ASSISTANT,**

CONTAINING A CATALOGUE OF

Garden and Flower Seeds,

WITH PRACTICAL DIRECTIONS UNDER EACH HEAD,

FOR THE CULTIVATION OF

CULINARY VEGETABLES.

SOME OF WHICH

ARE NOT GENERALLY INTRODUCED INTO THE
UNITED STATES.

BY T. BRIDGEMAN,

GARDENER, SEEDSMAN AND FLORIST, NEW-YORK

"The end of all instruction, should be the attainment of
useful knowledge."

BROOKLYN:

PRINTED BY NICHOLS AND MATTHEWS, 156 FULTON-ST.

1829.

Southern District of New-York, ss:

BE IT REMEMBERED, That on the twenty-fifth day of Feb. A. D. 1829, in the fifty-third year of the Independence of the United States of America, Thomas Bridgeman, of the said district, hath deposited in this office the title of a book, the right whereof he claims as author in the words following, to wit:

“The Young Gardener’s Assistant: containing a catalogue of Garden and Flower Seeds, with practical directions under each head, for the cultivation of Culinary Vegetables; some of which are not generally introduced into the United States. By T. Bridgeman, Gardener Seedsman and Florist, New-York.

“The end of all instruction should be the attainment of useful knowledge.”

In conformity to the act of Congress of the United States, entitled, “An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies, during the times therein mentioned;” and also, to an act, entitled, “An act supplementary to an act, entitled, an act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies, during the time therein mentioned, and extending the benefits thereof to the arts of designing, engraving, and etching historical and other prints.”

FRED. J. BETTS,
Clerk of the Southern District of New-York.

B. C. Bell -

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1851Y

PREFACE.



THE object of this little work is to enable our respectable seedsmen, while they are furnishing a catalogue of seeds for the use of the Kitchen and Flower Garden, to afford instructions at a trifling expense to such of their customers, as may not have a regular gardener, and thereby save themselves the blame of those who may not give their seeds a fair trial, for want of knowing how to dispose of them in the ground,

The author asks no preference over his fellow tradesmen in this department. He believes that the world is wide enough for all, and is willing that every man should keep his own custom; and being aware, that however anxious seedsmen may be to sell such seeds as will please their customers, they are sometimes charged with dishonest intentions from the failure of seeds, when the fault lies not with them, but with the gardener. He will endeavor, therefore, in his humble way, to render himself useful, both to the seedsman and the gardener, by giving brief directions for the management of the Kitchen Garden, in such a way as to insure success. In doing this he would remind the public, that as brevity must be consulted in this work, he cannot be expected, in a few pages, to do that justice to a subject which is only to be found in the books of eminent horticulturists. He hopes, however, to be sufficiently explicit

to give his readers a taste for the pleasurable and profitable, as well as healthful employment of gardening and thereby lead them to the perusal of other works of a more extensive nature. He also intends to devote a few pages to the attention of our fair country women, and direct them to a rational and delightful recreation. To this end he will, (after furnishing a catalogue of some of the most esteemed kinds of flower seeds,) give brief directions for promoting the growth of these seeds, while in the seed bed, leaving it to their own good taste and judgment to arrange the plants of these beauties of nature, so as to set them off to the best advantage.

The author is aware that the occupation of gardening is attended with difficulties, but he flatters himself that in proportion as his readers feel interested in the welfare of their vegetable progeny, in like proportion will they obtain pleasure and satisfaction in their successful employment. To obtain this, he would recommend them to make up their minds as to what vegetables or flowers they intend to introduce into their gardens, and then, after having procured good seeds, let them have every suitable implement ready to begin the work at the proper seasons for preparing and planting the garden. These will be shown in the following pages, interspersed with directions on some other important subjects connected with this undertaking.

T. BRIDGEMAN.

Bowery Road, January, 1829.

GENERAL REMARKS.

BEFORE I commence the Catalogue, it may be necessary for me to direct the reader's attention to some important matters essential to the good management of a garden.

The mode of laying out the ground, is a matter of taste, and may be left to the gardener himself; the form being a thing of trifling importance in the production of useful vegetables, or whether the ground be laid out in beds of four or ten feet wide, provided it be well worked, and the garden kept neat and free from weeds.

Those who have not a garden already formed, should, however, fix on a level spot where the soil is deep; but as we have not always a choice, I would recommend the reader to that which is within the reach, and ought to be the object of every man, namely, to make the most of what he has.

Previous to entering on the work of the garden, the gardener should lay down rules for his future government. In order to this, he should provide himself with a blank book. In this book he should first lay out a plan of his garden, allotting a place for all the different kinds of vegetables he intends to cultivate. As he proceeds in the business of planting his grounds, if he were to keep an account of every thing he does relative to his garden, he would soon obtain some knowledge of the art. This the writer has

done for the last nine years, and he flatters himself that a publication of the results of his practice, will be interesting and useful to his readers.

One great article to be attended to is, to have a supply of good old manure and other composts ready to incorporate with the earth ; also a portion of ashes, soot, tobacco dust and lime, for the purpose of sowing over seed beds in dry weather ; this will tend in a great measure to destroy insects which sometimes cut off the young plants as fast as they come up.

If the ground cannot be all manured as it should be, it is of primary importance that those vegetables be provided for which most need manure. A perusal of the catalogue will enable the young gardener to judge of the kinds of garden products which require most. Lest I should not have been explicit enough in this particular, I would inform him that good rich manure is indispensably necessary for the production of Brocoli, Cauliflower, Cabbage, Lettuce, Spinage, Onions, Radishes and Salads in general.

In the event of a scanty supply of manure, those kinds of vegetables which are raised in hills or drills, may be provided for by disposing of the manure immediately under the seeds or plants.

The next important matter is to have the ground in suitable condition to receive the seed. I would wish it to be understood, that I am an advocate for early sowing and planting, even at the risk of loosing a little seed, provided the ground be fit to receive it. A light sandy soil will be benefitted if worked when moist, as such treatment will have a tendency to make it more compact ; on the contrary, if a clay soil be worked when too wet, it kneads like dough, and ne-

ver fails to bind when drought follows, and this not only prevents the seeds from rising, but injures the plants materially in their subsequent growth, by its becoming impervious to the moderate rains, dews, air and influence of the sun, all which are necessary to the promotion of vegetation.

Some gardeners, as well as some writers, recommend certain fixed days for sowing and planting particular kinds of seeds; I think it necessary to guard my readers from being misled. The failure of crops may be often attributed to the observance of certain days for sowing. If some kinds of seeds be sown when the ground is wet and cold, they will become chilled in the ground, and seldom vegetate. If they be sown in very dry weather, the germinative parts of the seed may become injured by the burning rays of the sun, or the young plants may get devoured by insects as fast as they come up. To obviate these difficulties, I have generally allowed a week or ten days for the sowing of the seeds, intending the medium as the proper time for the vicinity of New York. With this clearly borne in mind, the reader, who observes the difference in the degrees of heat and cold in the different parts of the country, will know how to apply these instructions accordingly.

Much depends on the manures used on particular kinds of soils. The great art of improving sandy and clayey soils, is to give the former such dressings of clay, cow dung and other kinds of manure, as will have a tendency to bind and make them more compact, and consequently more retentive of moisture; and to the latter, coats of horse dung, ashes, sand, and such other composts as may tend to separate the par-

ticles and open the pores of the clay so as to cause it to approach as near as possible to a loam.

The nearer the ground approaches to a sandy soil, the less retentive will it be of moisture ; the more to a clayey, the longer will it retain it ; and the finer the particles of which the clay is composed, the more tenacious will it be of water, and consequently be longer in drying, and the harder when dry ; but earth of a consistence that will hold water the longest, *without becoming hard when dry*, is that of all others, the best adapted for raising the generality of plants in the greatest perfection. This last described soil is called loam, and is a medium earth, between the extremes of clay and sand.

I have in most cases recommended drills to be made at certain depths for the different kinds of seeds, and when I have stated that the drills should be two inches deep, it is intended that the seeds should be covered only one inch, which they will be when planted in these drills and covered—and so in proportion for any other depth required. This may serve as a guide to the young gardener, but circumstances alter cases ; if for instance, some particular crops should fail, this would render it necessary, if the season be far advanced to risk, a further planting of seeds, even if the weather be hot and the ground dry ; if these be planted a little deeper, they may escape the violent heat of the sun, and in the event of a shower, the ground would become sufficiently moist to bring them up ; whereas, it sometimes happens that seed sown after a shower do not vegetate until after the season is too far advanced to bring the crop to perfection.

The work of drilling may be performed in various ways ; in some cases a plough is used, in others a small hoe, or a dibble drawn along the edge of a board or line ; it is of little consequence which way the work is done, if it be well done. While I leave the gardener to make his own choice of tools, I would suggest that he be provided with two or three drilling machines ; these, every handy man may make for himself ; they should be in the form of a garden rake, with a stout heavy back and five teeth two inches broad, and tapered so as to enter the ground and leave drills two inches deep. If one be made with the teeth eight inches apart, another twelve, and another fourteen, they will be useful in making drills for various seeds, and drills thus made, serve, instead of straining a line, for every row in planting Cabbage, Lettuce, Leeks, &c. the line being strained at one edge of the bed, and the drilling machine drawn strait by the line, makes five drills at once. If they are straight they may be kept so, by keeping one drill open for the outside tooth to work in until the ground be all drilled.

Gardeners practice different methods of covering up seeds, some do it with a hoe, others with a rake or harrow ; some draw a portion of the earth to the side of the bed, and after sowing the seeds, return it regularly over the bed ; in some particular cases a sieve is used, in others a roller. Rolling or treading in seeds is necessary in dry seasons, but it should never be done when the ground is wet.

There is nothing that protects young crops of Turnips, Cabbage and other small plants from the depredation of the fly, so well as rolling ; for when the surface is rendered completely smooth, these in-

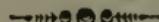
sects are deprived of the harbour they would otherwise have under the clods and small lumps of earth. This method will be found more effectual than soaking the seed in any preparation, or dusting the plants with any composition whatever ; but as the roller must only be used previous to, or at the time of sowing the seed, and not even then if the ground be wet, it is necessary that the gardener should have a hogshead always at hand in dry weather, containing infusions made of waste tobacco, lime, soot, cow dung, elder, burdock leaves, &c. A portion of these ingredients, or any other preparation that is pernicious or poisonous to insects, without injuring the plants, thrown into a hogshead kept filled up with water, if used moderately over beds of young plants in dry weather, would, in almost every case, insure a successful crop.

If it be necessary at any time to sow seeds in dry weather, it is recommended to soak the seed in water mixed with sulphur. This practice, with attentive watering, will cause the seed to vegetate speedily.

If it should be requisite to transplant any thing when the ground is dry, the transplanting should be always done as soon as the earth is fresh turned over, and the roots of the plants should be steeped in mud made of rich compost, before they are set out.

I have in most cases recommended seeds to be sown in drills drawn from 8 to 12 inches apart, in preference to sowing broadcast, because the weeds can be more easily destroyed by means of a small hoe ; and which, properly used, greatly promotes the growth of young plants.

CATALOGUE, &c.



ARTICHOKE.—*Cynara.*

VARIETIES.—*There are two principal varieties or species of the Garden Artichoke;—the Cynara Scolymus or French Artichoke, and the Cynara Hortensis or Globe Artichoke.*

It is a perennial plant, producing from the root annually its large squamose heads, in full growth, in England, in June or July until October or November. The Globe Artichoke, which produces large globular heads, is best for general culture, the heads being considerably larger, and the eatable parts more thick and fleshy.

Both sorts may be raised from the seed, or young suckers from the bottom taken off in the spring. A plantation of Artichokes will continue to produce good heads six or seven years, and sometimes longer; but it must be observed, that if a supply of this delicious vegetable be required throughout the season, a small plantation should be made from suckers every spring for a successive crop, as the young plants will not produce their heads in perfection till after the crops of the old standing ones are over.

The most likely way to obtain a supply of Artichokes in this country, is to sow the seed in the latter end of March or early in April, in a bed of good rich earth, or it may be planted in drills one inch deep, and about twelve inches apart. The ground should be light

and moist, not such as is apt to become bound up by heat, or that in consequence of too large a proportion of sand is likely to become violently hot in summer, for this is extremely injurious to these plants. After the plants are up, they should be kept free from weeds, and the earth often loosened around them.

At the approach of winter they should be covered up with straw, leaves, or light dry litter, and they will be fit to transplant in the following spring.

The business of transplanting must be performed the latter end of March or early in April. Having fixed upon a proper soil and situation, lay on it a good quantity of rotten dung, and trench the ground one good spade or eighteen inches deep, incorporating the manure therewith; this being done, take up the plants, and after shortening their tap roots a little, and dressing their leaves, plant them with a dibble, in rows five feet asunder, and two feet plant from plant in the row, leaving part of their green tops above ground, and the hearts of the plants free from any earth over them, and give each plant a little water to settle the roots.

The following method of planting Artichokes is practiced in Berkshire, (Eng.) the plants are placed in rows three feet and a half or four feet apart in the rows, and so deep that a basin may be formed round each plant, as it is fond of water, and in the fall these basins are filled up by drawing the earth into them, and the plant is covered up two or three inches by rounding up the earth over them.

Some make new plantations with the seeds at once, this may be done by preparing the ground as above, and sowing a few grains of good fresh seed in each

spot where a plant might be set, covering them about three quarters of an inch deep, and then by marking each spot with a peg stuck in the ground, the vacant places may be planted with Cauliflower, Cabbage Plants, Dwarf Beans, Lettuce, &c., taking care to keep the plants at a sufficient distance from the young Artichokes.

The Winter dressing of Artichokes is an important operation; on it depends much of their future success. This should not be given them as long as the season continues mild, that they may have all possible advantage of growth, and be gradually inured to the increasing cold weather; but it should not be deferred to the setting in of hard frost, lest the entire work be lost.

In the first place, cut all the large leaves close to the ground, leaving the small ones which rise from the hearts of the plants; after this, line and mark out a trench in the middle, between each row, from fourteen to sixteen inches wide, presuming that the rows are five feet apart, as directed. Then lightly dig the surface of the beds from trench to trench, burying the weeds, and as you proceed, gather the earth round the crowns of the plants to the height of about six inches, placing it in gently between the young rising leaves, without burying them entirely under it; this done, dig the trenches one spade deep, and distribute the earth equally between and on each side of the plants, so as to level the ridges, giving them at the same time a neat rounding form; finish by casting up with a shovel the loose earth out of the bottom of the trenches evenly over the ridges, in order that the water occasioned by heavy rains, &c.,

may immediately run off; on which account the trenches ought to have a gentle declivity, as the lodgement of water about the roots in Winter is the greatest evil and danger they have to encounter, even greater than the most severe frosts that we are subject to.

The beds are to remain so, until there is an appearance of hard frost, when they should be covered with light dry litter, straw, leaves of trees or the like, the better to preserve the crowns and roots from its rigour. In this manner, the roots will remain in perfect safety all the winter. As soon as the very severe frosts are over, the beds must be uncovered, and when you perceive the young shoots begin to appear above ground, or rather one or two inches up, then, and not before, proceed to levelling down the beds into the alleys or trenches, rounding them in a neat manner; then dig and loosen all the earth round the plants; at the same time, examine the number of shoots arising on each stool or root, selecting three of the strongest and *healthiest looking* on every stool to remain; all above that number are to be slipped off close to the roots with the hand, unless you want such to make new plantations with, in which case, any extra number for that purpose are to remain on the mother plants, until they are about eight or ten inches high from their roots, or junction with the old plants, when they are to be slipped off and planted in a bed prepared in the same manner as directed for the young plants, taking care at the same time to close the earth about the crowns of the roots, and drawing it a little up to the remaining suckers.

Observe, the Spring dressing is to be given when the plants are in the above described state, whether that happens in February, March, or April, occasioned by the difference of climate, or the earliness or lateness of the Spring.

The gardeners, near London, generally take off the side suckers, or small Artichokes, when they are about the size of a hen's egg. These meet with a ready sale in the markets, and the principal heads that are left are always larger and handsomer. The maturity of a full grown Artichoke is apparent by the opening of the scales ; and it should always be cut off before the flower appears in the centre ; the stem should be cut close to the ground at the same time.

When your Artichoke plantations want manure, lay on a coat of old rotten dung, previous to the digging of the trenches in November, and cover it over with the earth as you throw it up ; in the spring following, dig it in.



ASPARAGUS.—*Officinalis.*

VARIETIES.—*Gravesend*—*Battersea*—*Large White*
Reading.

Asparagus plants may be raised by sowing the seeds in the Fall as soon as ripe, or in March, and the early part of April. It requires some of the best ground in a garden. The seed may be sown in drills, ten or twelve inches assunder, and covered half an inch with light earth. When the plants

are up they will need a careful hoeing, and they should afterwards be kept free from weeds.

The seed sown in the Fall generally makes the strongest plants, and will be fit to transplant into beds when they are a year old.

A plantation of Asparagus, if the beds are properly dressed every year, will continue to produce good buds for twenty years or more.

New plantations of Asparagus may be made in the months of March and April. The ground for the bed must not be wet, nor too strong or stubborn, but such as is moderately light and pliable, so as it will readily fall to pieces in digging or raking, and in a situation that enjoys the full Sun. It should have a large supply of good rotten dung three or four inches thick, and then be regularly trenched two spades deep, and the dung buried equally in each trench, twelve or fifteen inches below the surface. When this trenching is done, lay on two or three inches of well rotted manure all over the surface, and dig the ground over again, eight or ten inches deep, mixing this top dressing and incorporating it well with the earth. The ground being thus prepared and laid level, divide it into beds four feet and a half wide, with alleys two feet wide between each bed.

At each corner of every bed, let a firm stake be driven into the ground, to serve as a mark for the alleys. Four rows of Asparagus are to be planted in each bed, and ten or twelve inches distance to be allowed between plant and plant in the row; and let the outside rows of each bed, be eight inches from the edge.

Strain your line along the bed eight inches from the edge ; then, with a spade, cut out a small trench or drill close to the line, about six inches deep, making that side next the line nearly upright, and when one trench is opened, plant that before you open another, placing the plants upright ten or twelve inches distance in the row.

The plants must not be placed flat in the bottom of the trench, but nearly upright against the back of it, and so that the crown of the plants may also stand upright, and two or three inches below the surface of the ground, spreading their roots somewhat regularly against the back of the trench, and at the same time drawing a little earth up against them with the hand as you place them, just to fix the plants in their due position until the row is planted ; when one row is thus placed, with a rake draw the earth into the trench, over the plants, and then proceed to open another drill or trench as before directed ; and fill and cover it in the same manner, and so on till the whole is planted ; then let the surface of the beds be raked smooth and cleared from stones.

Some make new plantations with the seeds at once ; this may be done by preparing the ground as before directed, and planting a few grains of seed in each place allotted for a plant ; they should be afterwards thinned, leaving the strongest plants to stand at the same distances every way as before.

A plantation of Asparagus, thus raised, will produce buds fit to cut the third Spring after sowing, but will be very large and fine the fourth year.

Winter Dressing of Asparagus Beds.

About the beginning of November, if the stalks of your Asparagus turn yellow, which is a sign of their having finished their growth for the season, cut them down close to the earth, carry them off the ground, and clear the beds carefully from weeds.

Asparagus beds must have an annual dressing of good manure ; let it be laid equally over the beds, two or three inches thick, after which, stretch a line, and with a spade mark out the alleys from eighteen inches to two feet wide, agreeably to their original dimensions.

Then dig the alleys one spade deep, and spread a considerable quantity of the earth evenly over the beds ; observe to make the edges of the beds straight, full, and neat, and to finish your work in a becoming manner, giving a moderate rounding to the beds, especially if the ground be inclined to wet.

The alleys should be afterwards filled up with leaves or litter well trampled down, which would in some measure, prevent the frost from entering that way to the Asparagus roots. The Seedling Asparagus should also have a slight dressing ; that is, to clear the bed from weeds, and then to spread an inch or two in depth of dry rotten dung over it, to defend the crown of the plants from frost.

Spring Dressing of the Beds.

This work should be done from about the latter end of March, to the middle of April. For the purpose of digging or forking these beds, you should be provided with a proper fork, having three short tines, perfectly flat, and about an inch broad ; however, in

want of such, it may be performed with a small short pronged dung fork.

In forking the beds, be careful to loosen every part to a moderate depth, but taking great care not to go too deep to wound the crowns of the roots.

The above work of forking these beds is most necessary to be done every Spring, to improve and loosen the ground, and to give free liberty for the buds to shoot up.

The beds being forked, they must afterwards be raked even; observing, if you do not rake them immediately after they are forked, to defer it no longer than the first week in April, at which time a few Radish seeds may be scattered over them, to pull up while young.

Asparagus plants will not produce buds large enough to cut for general use, in less than three years from the time of planting. But in the fourth year, when the shoots are three or four inches high, they will bear extensive cutting. The best way of cutting, is to slip the knife down perpendicularly, close to each shoot, and cut it off slantingly, about three or four inches within the ground, taking care not to wound any young buds coming up from the same root, for there are always several shoots advancing in different stages of growth.

BEANS.—(Eng. Dwarfs.)—*Vicia faba*.

VARIETIES.—*Early Mazagan*—*Early Lisbon*—*Early Long Pod*—*Sword Long Pod*—*Large Windsor*—*Kentish Windsor*—*Taylor's Windsor*—*Large Toker*—*Sandwich Bean*—*Mumford*—*Green Genoa*—*Green Windsor*—*White Blossomed*—*Red Blossomed*—*Dwarf Cluster*—*Broad Spanish*—*Green Nonpareil*—*Turkey Long Pod*—and *Common Field or Horse Bean*.

The principal cause of this garden product not succeeding well in this country, is occasioned by the Summer heat overtaking them before they are podded, causing the blossom to drop off prematurely; consequently, the crops are poor and scanty—to obviate this difficulty, they should be planted as early in the year as possible. They are generally planted in England, from October to April, for early crops, and from that time to July, for late crops. It sometimes happens that their early plantings are injured by the extremity of their Winters, but they never miss having an average crop.

In order to insure success here, I would recommend those who are desirous of obtaining a tolerable supply of these vegetables, to plant them early, as it will be recollect that they will be deficient in quality as well as in quantity, on the approach of the warm weather. If the ground should be frozen the last week in January, or early in February, they may be sown in boxes of earth placed in a light cellar, or in earth on the floor, and afterwards transplanted. If this is not done, let them be planted as soon afterwards as possible, in drills two or three inches deep, and if it should happen that they cannot be

planted by the middle of February in the place where they are to stand, let some of the early kinds be sown pretty thick in a bed of light earth ; and when come up to an inch or two in height, transplant them in rows from thirty inches to three feet asunder, according to the size and kind, and the Beans two or three inches distant in the rows. The method is this : dig a bed about three or four feet broad, of good earth, in a warm situation ; this being done, draw broad drills with a small spade, or common hoe, flatways across the bed, and scatter the Beans pretty thick in the drill, and draw the earth equally over them ; and thus, if severe frosts should prevail before they come up, or in their infant state while remaining altogether in the bed, they can be readily protected from frost, with frames, mats, or litter, until fit to transplant. As soon afterwards as the weather is favourable, let them be taken up carefully out of the seed bed, with their full spread roots, and as much earth as will hang about them, and be carefully transplanted as before directed, observing to close the earth lightly about every plant. They will soon take root and grow freely. This method is considered by some as preferable to the general method of planting them in the place where they are to stand, and it is said, that by transplanting they generally bear several days sooner. It may be necessary to observe that a strong heavy soil is the most suitable, but they often do well in moderately light low ground. The early kinds may succeed if planted in the month of March, and it is only from those early sown that any tolerable produce may be expected in the United States, especially in the middle and southern parts.

The Mazagan and Lisbon are the earliest, the White Blossom Bean is very delicious, and boils much greener than any other kind ; but the Genoa bears the heat of our climates better than either of the others, and therefore is the most suitable for late crops. The Long Podded Bean is very good, and bears well ; but the Windsor, Sandwich, Toker, and Broad Spanish kinds, are more esteemed than any other. The Dwarf Cluster Bean is a great bearer, never grows above a foot or fourteen inches high, and may be planted in rows, either in beds or borders, the rows to be about two feet asunder, and as this kind branches out considerably from the root, the Beans must be planted in single rows, and five or six inches distant from one another.

If all the different varieties are planted at one time, they will come into bearing in a regular succession, according to their different degrees of earliness—and it will be necessary to repeat the plantings every two weeks from January to the latter end of March.

As soon as the Beans are three or four inches high, they will need a careful hoeing, and if some earth be drawn up to their stems, three or four times in the course of their growth, it will greatly refresh and strengthen them.

When they are arrived at full bloom, and the lower pods beginning to set, the tops may be broken off. If this be done at the proper time, it will greatly promote the swelling of the pods, as well as their early maturity ; for having no advancing tops to nourish, the whole effort of the root will go to the support of the fruit.

BEANS.—(Kidney Dwarfs.)—*Phascolus.*

VARIETIES.—*Early Yellow Cranberry*—*Early Mohawk*—*Early Dwarf Cluster*—*Early Yellow Six Weeks*—*Early Dun Colored or Quaker*—*Early China Dwarf*—*Early Black Dwarf*—*Large White Kidney Dwarf*—*White Cranberry Dwarf*—*Red Cranberry Dwarf*—*Warrington or Marrow*—*Refugee or Thousand to One*—*Rob Roy*—*White Cutlass Bean of Carolina*—*Bonavista*.

These kinds of Beans being all excellent, I shall leave my readers to choose for themselves. The early kinds will come to perfection in from six to eight weeks after planting. Some of the other kinds will keep longer in bearing, and are esteemed by some on that account. These, with some of the early kinds, may be planted in the months of May and June. If a regular succession of young Beans be wanted throughout the summer, some of the early kinds should be planted every two weeks from the last week in April until the beginning of August. These Beans require light rich soil, and may be planted in hills (three or four in a hill) or drills about two inches deep, and the Beans two or three inches from each other; the drills may be from two and a half to three feet apart. (The Refugees are best planted in hills.) As the Beans progress in growth, let them be carefully hoed, drawing the earth up to their stems at the same time, and they will be soon fit for the table.

The Bonavista is a new Dwarf Bean, by many considered equal to Lima Beans. They grow nearly two feet high.

BEANS.—(Pole or Running.)—*Phaseolus Limensis.*

VARIETIES.—*Large White Lima*—*Sieva* or *Carolina*.

Phaseolus.

VARIETIES.—*Scarlet Runners*—*White Dutch Runners*—*Dutch Case Knife* or *Princess*—*Red Cranberry*—*White Cranberry*.

The Beans of the latter species may be planted the latter end of April, and in May and June, either in hills three feet distant from each other, or in drills about two inches deep. The poles should be eight or ten feet long, and may be fixed in the ground before the Beans are planted.

The Carolina and Lima Beans should not be planted in the open ground until the second week in May, unless the season be very favourable, and the ground warm. As these Beans are apt to get injured by cold and damp weather, let six or eight Beans be planted half an inch deep round each pole, and afterwards thinned, leaving three or four good plants in a hill, which hills should be from four to five feet distance from each other every way.

The soil for running Beans should be the same as for the Dwarf kinds, except the Lima, which requires richer ground than any of the other sorts.

If any of these Beans are wanted earlier than the ordinary season, they may be planted in flower pots in April, and placed in a green house or garden frame, and being transplanted in May with the balls of earth entire, will come into bearing 10 or 14 days earlier than those which are planted in the natural ground.

BEET.—*Beta.*

VARIETIES.—*Early Blood Turnip rooted*—*Early White Scarcity*—*Early Dwarf Blood*—*Long Blood Red*—*Yellow Turnip rooted*—*Mangel Wurzel*—*Sir John Sinclair's*—*French Sugar or Amber*.

A small bed of the earliest and most esteemed kinds of Beets may be planted in good rich early ground towards the end of March, or in the first week of April, which being well attended to, will produce good roots in June.

Draw drills a foot apart, and from one to two inches deep; drop the seeds along the drills two or three inches from each other, and cover them with the earth. When the plants are up strong, thin them to the distance of six or eight inches from each other in the rows. The ground should be afterwards hoed deep round the plants, and kept free from weeds.

Beets may be planted for general crops from the first week in April until the beginning of June, in rich mellow ground, and in case of failing crops, they may produce good roots in the Fall, if planted the last week in June.

It is always best to thin them out early. If the tops are used as a vegetable, they should not be left too long for this purpose, or they will greatly injure the roots of those that are to stand. Beds that are to stand through the summer, should be kept clean by repeated hoeings; and the roots intended for winter use should be taken up in October, or early in November.

BORECOLE AND BRUSSELS SPROUTS.

Brassica.

VARIETIES.—*Green Curled or Fringed Cabbage—Purple Curled—Thick Leaved Curled—Finely Fringed—Siberian or Scotch Kale—Brussels Sprouts.*

For the garden, these may be treated in every respect as Winter Cabbages :—the seeds may be sown about the middle of May, and the plants set out in the month of July, in good rich ground. They are never so delicious as when rendered tender by smart frosts ; they are very valuable plants to cultivate, particularly in the more Southerly States, as they will there be in the greatest perfection during the winter months ; they will also, if planted in a gravelly soil, and in a sheltered warm situation, bear the winters of the Middle States ; and may be kept in great perfection in the Eastern States, if taken up before the winter frost sets in with much severity, and placed in trenches up to their leaves, and covered with straw or other light covering : the heads may be cut off as they are required for use ; and in the spring, the stems being raised up, will produce an abundance of delicious Greens.

This vegetable is frequently raised in England for cattle, which, on account of its luxuriant growth, is very profitable ; the Brussels Sprouts grow there from three to five feet high, and produce an abundance of Greens in the winter.

BROCOLI.—*Brassica oleracea Italica.*

VARieties.—*Early Dwarf Purple*—*Early Green*—
Large Late Purple—*Dwarf Late Purple*—*Branching Purple*—*Late Green*—*Brown*—*White* or
Cauliflower Brocoli—*Large Purple Cape*—*Granges White Cape* and *Sulphur Cape*.

The several varieties of Brocoli and Cauliflower may be justly ranked amongst the greatest luxuries of the garden. They need only be known in order to be esteemed. The Brocoli produces heads, consisting of a lump of rich seedy pulp, like the Cauliflower, only that some are of a green colour, some purple, some brown &c., and the white kinds so exactly resemble the true Cauliflower as to be scarcely distinguished either in colour or taste.

Brocoli is quite plentiful throughout England the greater part of the year, and it is raised with as little trouble as Cabbages are here. The mode of raising the Purple Cape Brocoli is now generally understood in this part of America; but the cultivation of the other kinds, has been nearly abandoned on account of the ill success attending former attempts to bring them to perfection. In such of the Southern States, where the winters are not more severe than in England, they will stand in the open ground, and continue to produce their fine heads from November to April. In the Middle, and especially in the Eastern States if the seeds of the late kinds be sown in March on a hot bed, and the earlier kinds in April and May in the open ground, and treated in the same manner as Cauliflower plants, it would be the most certain method of obtaining large and early flowers; but as only a

part of these crops can be expected to come to perfection before the approach of winter; the remainder will have to be taken up, laid in by the roots, and covered with earth up to the lower leaves.

Those who are desirous of obtaining Brocoli and Cauliflower in any quantity, so as to have all the different varieties in succession, should have places erected similar to some of our greenhouses, the back and roof may be made of refuse lumber, which being afterwards covered with fresh stable dung will keep out the frost. The place allotted for Cape Brocoli and Cauliflower, should have a glazed roof to face the South—the sashes must be made to take off in mild weather, but they should be always kept shut in severe cold weather, and covered with mats, or boards, litter, &c. so effectually as to keep out the frost.

The hardy kinds of Brocoli may be preserved without glass, by having shutters provided to slide over the front in extreme cold weather, which may be covered over with fresh stable dung or other litter. If these plants get frozen, it will be necessary to keep the full power of the sun from coming on them until they be thawed, this may be done by sh. king a little straw over the bed as they lay. It may perhaps be not generally understood that the sudden transition from cold to heat, is more destructive to vegetables than the cold itself. If plants of any kind get frozen, and cannot be screened from the sudden rays of the sun, they should be well watered as the air gets warm, and before they begin to thaw; this will draw out the frost and may be the means of saving the plants.

The proper time for sowing the seed of the Purple Cape Brocoli, is from the tenth to the twentieth of May, those who intend to provide a place for the winter keeping of the other kinds, may sow seeds of the most esteemed varieties at the same time, or in two or three separate sowings, a week apart.

When the plants are of sufficient size, they should be transplanted into extraordinary rich ground, which should be brought previously into good condition. This being done, plant them in rows two feet and a half apart, and two feet distance in the rows. As soon as they have taken root, give the ground a deep hoeing, and repeat this two or three times in the course of their growth, drawing some earth around their stems at the same time.

Such plants as are not likely to produce heads in the open ground, should be taken up early in October, and laid in carefully close, together with the roots and stems covered with earth as far up as the lower leaves. Those who have not a place provided, may keep a few in a light cellar, but every gardener and private gentleman should have suitable places erected for a vegetable that yields such a delicious repast, at a time when other luxuries of the garden are comparatively out of our reach.



CAULIFLOWER—*Brassica oleracea botrytes*.

VARIETIES.—*Early—Late*.

This is a first rate vegetable ; to obtain which, great pains must be taken in every stage of its growth, the extremes of heat and cold being very much against

it. The seeds of the early kinds should be sown between the 16th and 24th of September, in a bed of clean rich earth. In about four or five weeks afterwards, the plants should be pricked out into another bed at the distance of four inches from each other every way; this bed should be encompassed with garden frames, covered with glazed sashes, and boards or shutters; the plants should be watered and shaded a few days till they have taken root, they will afterwards require light and air every mild day throughout the winter, but the outsides of the frames must be so lined and secured, and the tops of the beds so covered as to keep out all frost.

They should be well attended to until the time of transplanting in the spring, and those who have not hand or bell glasses so as to enable them to set some out by the latter end of March, should have a frame ready about the last week in February, in order that they may be transplanted to the distance of eight or nine inches apart; this would prevent them from buttoning or growing up weak; if this be not done some of the strongest plants should be taken out of the bed and planted in flower pots, which may be afterwards placed in a frame or greenhouse until the weather be warm and settled, which may be expected soon after the middle of April. They should be then turned out with the balls of earth entire, and planted in a bed of the richest earth in the garden, at the distance of two feet and a half from each other every way; the residue may be taken up from the frame the last week in April, or earlier if the season proves mild, by means of a garden trowel and planted as above. The plants should be afterwards well at-

tended to by hoeing the ground deep around them, and bringing the earth gradually up to the stems, so as to push them forward before the approach of warm weather.

The Fall plants are generally allowed to succeed best, but good Cauliflowers are sometimes produced from seed sown in a hot bed towards the end of January, or early in February. Great pains must be taken to have the bed in good condition to receive the seed ; when the plants are up, they must have air every mild day, and as they progress in growth, they should have as much air as possible consistent with their preservation, but the beds must be kept covered up every night as long as there is any danger of frost. When the plants are three or four inches high, they must be pricked out three or four inches apart into another bed, and by the latter end of April they may be transplanted into the open ground, and treated in every respect the same as the other. These plants if well managed, will succeed very well, and those that do not flower by June, may make good heads in the Fall.

In the early part of April, Cauliflower seeds may be sown in the open ground, the plants should be pricked out in May, and transplanted into good ground early in June to flower in the Fall : those that are not likely to flower by the last of October, should be taken up and provided for in the manner recommended for the Cape Brocoli.

It will be beneficial in the raising of Cauliflowers to defend them from the north, west winds, by hedges made of reeds, or pales thatched with straw.

CABBAGE.—*Brassica Oleracea.*

VARIETIES.—*Early York*—*Early Dutch*—*Knight's Early Dwarf*—*Early Salisbury Dwarf*—*Early Emperor*—*Early Penton*—*Early Wellington*—*Early Sugar-loaf*—*Early London Battersea*—*Early Heart-shaped*—*Early Imperial*—*Large Late Drum-head*—*Large Sugar-loaf*—*Large Late Battersea*—*Large Bergen or Great American*—*Green Glazed*—*Large Scotch, for Cattle*—*Red Dutch, for Pickling*—*Green Globe Savoy*—*Yellow Savoy*—*Turnip Rooted*.

The early kinds of spring Cabbage may be raised in various ways. Some sow the seeds between the 10th and 24th of September, pricked out and managed the same as Cauliflower plants, only that they are more hardy, and may be kept through the winter without Glazed Sashes. Some prefer sowing the seeds in a Cold-bed, covered by a garden frame, and with sashes: If this frame be placed on a warm border, and kept free from frost, and the seed of the early kinds sown the latter end of January or early in February, these plants will be better than those raised in the Fall; as they will not be so liable to run to seed, and they will be more hardy than those raised on hot beds in the spring.

The Gardeners about New-York sow their seed on hot-beds covered with glass frames, the last week in February, or early in March; the plants will be fit to transplant about the middle of April, and should be set out in good ground from sixteen inches to two feet apart, according to the size and kind. These, by being hoed often, will produce good Cabbages in

June. If seeds of the large early kinds be sown in a warm border early in April, they will produce plants fit to transplant in May, and will make good Cabbages for Summer use.

The seeds of Savoys and late Cabbage in general, may be sown at two or three different times, between the 10th and 25th of May, in fresh rich ground free from weeds ; the young plants will require to be watched at this season of the year, and if they are attacked by insects, recourse must be had to the ingredients recommended in the general directions, these, if used every evening until the plants get strong, will bring them forward for transplanting in the second or third week in July.

The Bergen and other large kinds should be planted in rows at least thirty inches asunder, and the plants about two feet apart in the rows ; the Savoys and smaller sorts may be placed from four to six inches nearer every way. Cabbages succeed best in a fresh rich soil, and the ground should be deeply hoed at least three times during their growth.

The *Brassica rapa*, or Turnip Cabbage produces its bulb or protuberance, on the stems above ground, immediately under the leaves. It is eatable when young, or about the size of a garden turnip.

The seeds may be sown in April or May, and the plants afterwards treated the same as Cabbages, only that in earthing up the plants you must be careful not to cover the globular part.

They are much more hardy than Turnips, and in England the bulbs often grow to upwards of twenty inches in circumference, and weigh from ten to twelve pounds. They are cultivated for the feeding of

cows and sheep, as well as for table use ; in either case they treat them as they do Cabbages, or sow them like Turnips, and afterwards hoe them out to proper distances

The Brassica Napo, or Turnip rooted Cabbage, has an oblong thick root in the form of a winter radish ; it is extremely hardy, and will survive very hard frosts ; the seeds should be sown in strong rich ground, and treated in every respect as Turnips, observing to thin the plants with the hoe to the distance of about sixteen inches apart. Their roots will be much larger and better when treated in this way, than if transplanted.

This vegetable merits attention from the Farmer, and is a valuable article to cultivate for cattle, as it will, with proper care, produce from 25 to 30 tons per acre. The tops and sprouts make delicious Greens in the spring for table use.

COLEWORT OR COLLARDS.—*Brassica oleracea*.

This is a species of Cabbage which is eaten when young ; it so nearly resembles the early kinds of Cabbage, that it is very seldom cultivated. The English prefer sowing the seeds of early heading kinds of Cabbages, as a substitute, which being done at different seasons, enables them to procure a supply of fresh Greens from their gardens every day in the year. This is not attainable here, on account of the extremes of heat and cold ; but Collards would prove very valuable and acceptable in the event of an unfavourable season for fall Cabbage.

If the seeds of Early York, Early Dutch Dwarfs, or

Sugar-loaf Cabbage be sown in June, July and August, and transplanted as they become fit, into good ground from fifteen to eighteen inches apart, the first planting would make good heads for fall use ; and the plants of late sowings, if transplanted in September and October in a warm border, would produce tender sweet eating Greens for use in the early part of the Winter ; the latter plantings may be placed 10 or 12 inches plant from plant. These could be easily sheltered on the approach of severe weather, without being taken up.

CARDOONS.—*Cynara cardunculus.*

The Cardoon Artichoke is much cultivated in Europe for Culinary purposes, such as for salads, soups, stewings, &c.

The stems of the leaves being thick and crisp, are the eatable parts after being blanched. They are in perfection in Autumn and Winter.

The seeds may be sown in a bed of rich earth in the month of April ; when the plants are up strong, they should be thinned to four or five inches distance, to prevent their becoming weak. They may be transplanted in June at the distance of four feet from one another every way ; observe, before planting, to dress their tops and roots the same as Cellery. As they advance in growth they are to be earthed up for blanching, keeping the leaves close together ; this may be done with bass or matting as practiced with endive ; they are afterwards to be earthed up gradually from time to time, until whitened to a sufficient height. As winter approaches, Cardoons must be taken up and laid away like Cellery, or they may be preserved with sand in a cellar.

CARROT.—*Daucus carota.*

VARIETIES.—*Early Horn—Long Orange—Blood Red—Lemon—Altringham.*

Of these several varieties of Carrots, the Early Horn is the earliest, but the Long Orange and Altringham are in greater esteem, on account of their bright orange colour, as well as for their great size and length. They grow to great perfection in a rich loamy soil, and may be raised in drills drawn about one inch deep, and twelve inches asunder. A small bed may be planted the latter end of March, for an early crop, and from that time to the end of June, for successive crops.

The most suitable ground for the main crop of Carrots or Beets, is that which may have been well manured in the Fall for Spinach, and would require no fresh manure. If the seed be sown in May, and the plants thinned out to the distance of five or six inches from each other, while young, and kept hoed, they would yield an abundance of fine roots for Winter and Spring use, by being taken up in the Fall, and preserved either in sand in a cellar, or in graves covered up in the garden.

Carrots are used in England as fodder for cows, sheep, oxen and horses. The seed is sown broadcast and harrowed in; after they have been once hoed, they are harrowed again; this loosens the soil, without hurting the crop, unless the ground happens to be rough, in which case they go over the land and clear the plants from heaps of mould that may gather about them. They frequently yield upwards of 800 bushels to an acre.

CELERY—*Apium graveolens*.

VARIETIES.—White Solid—Rose Coloured Solid—North's Giant Red—Italian—Celeriac, or Turnip Rooted.

Those who may want Celery for Summer use, should sow some seed of the White Solid in a slight hot bed early in March, but as plants raised in this way are apt to run to seed, it is much better to wait a fortnight, and sow some in a warm border. The seed for a general crop should be sown the last week in March, or early in April, in low but rich mellow ground; if it be sown in drills half an inch deep, and raked in even, it will produce strong plants by hoeing frequently between the rows.

The early sown plants should be pricked out into a nursery bed of rich earth as soon as they are two or three inches long, there to remain about a month, after which they will be fit to transplant into the trenches.

Choose for this purpose a piece of rich ground, in an open exposure; mark out the trenches by line, 10 or 12 inches wide, and allow the space of three feet between them, which will be sufficient for the early plantations. Dig each trench a moderate spade deep, laying the dug out earth equally on each side, between the trenches; lay three inches deep of very rotten dung in the bottom of each trench, then pare the sides and dig the dung and parings with an inch or two of the loose mould at the bottom, incorporating all well together, and put in the plants. Previous to planting, trim the tops of the plants, by cutting off the long straggling leaves, and also the ends of their

roots. Let them be planted with a dibble, in single rows, along the middle of each trench, five or six inches between plant and plant, as soon as they are planted give them a plentiful watering, and let them be shaded until they strike root and begin to grow.

The main crops may be planted in the same way, but in trenches four feet distant from each other, and an inch or two further from plant to plant; or in beds made in the following manner, which for the ease of preserving the plants in winter, will be found extremely convenient, besides a greater quantity can be raised on a given piece of ground.

Lay out the ground into beds of four feet wide, with alleys between, of three feet; dig the beds a spade deep, throwing the earth on the alleys; when done, lay four or five inches of good well rotted dung all over the bottom of the beds, dig and incorporate it with the loose earth, and cover the whole with an inch or two of earth from the alleys; plant four rows in each bed at equal distances, and from six to eight inches apart in the rows; after which, give them a plentiful watering and shade them.

The plants must be hoed occasionally until grown of sufficient size for earthing, which is done with the assistance of boards, by laying them along the rows, to support the leaves while you are putting in the earth from the alleys, and removing them as you progress in the business.

The earthing should never be done when the plants are wet, as this is apt to make Celery rusty, but should be performed gradually in fine weather as the plants progress in growth, repeating the earthing every two weeks, at which time care should be taken

to gather up all the leaves neatly, and not to bury the hearts of the plants. When they are grown two feet high, and well blanched, they are fit for the table. As Celery will grow three or four feet high in one season, it will be necessary to delay the planting of that which is intended for winter use until the latter end of July, but the trenches should always be got ready soon enough, to avoid a serious drought, which often delays the plantings till too late in the season. The blanching of Celery for winter use may be delayed until October.

The Celeriac or Turnip Rooted, may be planted either on level ground or in shallow drills, the roots of it swell like a Turnip and may be preserved in sand through the Winter. The French and Germans cut it in slices and soak it a few hours in vinegar ; by such simple preparation, it becomes as mellow as a Pine Apple and affords a delicious and very nourishing repast.



CHERVIL, OR CICELY THE SWEET—*Scandix odorata*
Cerefolium.

Chervil is a small salad herb of aromatic property ; its leaves are used as salads, and for soup, &c. The seed may be sown early in the Spring, in drills half an inch deep and ten or twelve inches apart ; and managed the same as Parsley.

CHIVES, OR CIVES—*Allium schænoprassum.*

This is a small species of Onion, growing in large tufts ; they are propagated by offsets from the root,

and may be planted either in the Spring or Fall, in rows ten or twelve inches apart, and the bulbs three or four inches apart in the rows ; they will soon take root, and increase very fast into large bunches of bulbs.

CORN SALAD, or *Fetticus.*

The *Valeriana locusta* variety *olitoria* grows commonly in the cornfields in England, hence it is called Corn Salad, and from its being sufficiently hardy to stand the Winter, it has acquired the appellation of Lambs Lettuce, from its affording them an early pasturage. It is cultivated for salads for winter and early spring use. The seed may be sown in rich clean ground, the latter end of August or early in September, and the plants must be covered with straw at the approach of severe weather.

CRESS—*Lepidium.*

VARIETIES.—*Curled, or Peppergrass—Broad Leaved Garden.*

Cress is also a small salad herb, and is generally used with lettuce, white mustard or rape. It should be sown in little drills very thick, (as should the white mustard and rape,) and cut before it comes into rough leaf. A small quantity in the salad season, should be sown every week in clean rich ground.

CUCUMBER—*Cucumis.*

VARIETIES.—*Early frame—Long Prickly—Short Prickly—Long Green Turkey—Long White Turkey—Green Cluster—White Spined—Small Gherkin or West India.*

The most suitable kinds of Cucumbers for early planting are the Early Frame, Short Prickly, and Long Prickly. These may be planted in the open ground the first week in May in hills four feet apart. Previous to planting, the ground should be prepared by incorporating a shovel full of rotten dung with the earth in each hill, after which four or five seeds may be planted half an inch deep. Cucumbers are liable to be attacked by a yellow fly, which sometimes devours all the young plants; these and other insects may be killed by sowing tobacco dust, soot, or powdered charcoal, round about the vines when they first come up. After this be done, the plants may be thinned to two or three in a hill, and the ground carefully hoed, drawing a little earth round them at the same time. Before the vines begin to run, they should be stopped; this is done by pruning off the top of the first runner bud, which will promote a stocky growth, and cause them to put forth lateral shoots at the first and second joints, to form fruitful runners; and from these, others of the same nature will be produced. Cucumber vines should be kept free from weeds, and if the weather proves dry, a gentle watering now and then given in the evening will be of considerable service.

Picklers may be raised by planting the seeds at any time in July. When the vines begin to bear,

they should be looked over and the fruit gathered as fast as it becomes fit, as the plant will cease to bear much if the fruit be permitted to get yellow.

EGG-PLANT,—or *Melongena*—*Solanum Origenum*.

VARIETIES.—*Purple*, (for culinary purposes)—*White*, (ornamental)

The seed of the Purple Egg-Plant must be sown in a hot-bed about the first of March, and the sashes kept down close until the plants come up, after which a little air may be given in the heat of the day. Towards the middle of May, the plants should be set out from twenty-four to thirty inches apart, in a rich warm piece of ground, and if kept clean, and a little earth drawn up to their stems when about a foot high, they will produce plenty of fruit.

The plants of the white kind may be raised in the same manner, and transplanted into pots in May, or if some of the seed be sown in a warm place the first week in May they will come to perfection in course of the summer.

ENDIVE, or SUCCORY.—*Cichorium endiva*.

VARIETIES.—*Green Curled*—*White Curled*—*Broad Leaved Batavian*.

The proper kind of Endive for early sowing, is the Green Curled, a small quantity of this may be sown at different times in April, May, and June, for those who would have it early. These crops will be very apt to run to seed, for this reason it will be best to delay the sowing of seeds for general crops until July. If a small quantity of each kind of seed be

sown two or three times in this month, they will produce a plentiful supply for use in the fall and early part of the winter. When the plants are three or four inches high, they should be transplanted into good ground, to the distance of a foot from each other, and immediately watered ; or if they are set out in cloudy or wet weather, it will save this trouble. The plants will require to be hoed and attended to in the same manner as Lettuce, until grown to a moderate size, when they must be blanched. Select the large and full hearted plants and with bass or other strings, tie them a little above the middle, not too tight, previously gathering up the leaves regularly in the hand. This must be done when the leaves are very dry, otherwise the plants will rot.

GARDEN BURNET.—*Poterium sanguisorba*.

The common Garden Burnet is a native of England, it grows wild in dry calcareous soils. It has fibrous roots, and retains its leaves throughout the year, but the stalks are annual : it has long been cultivated as a choice salad herb. The leaves being of a warm nature, are also used in cool tankards, and for imparting an agreeable flavour to wine and cider. The seed may be sown in drills about an inch deep and twelve inches apart, in March or April ; at which time, the roots of old plants may be parted off and the slips planted out separately.

INDIAN CORN—*Zea Mayz.*

VARIETIES.—*Early Golden Sioux*—*Early Canadian*—*Early Jefferson*—*Sweet or Sugar*—*Large Southern Horsetooth*—*Large Flour White*—*Nonpareil or Pearl (Curious)*—*Mottled*—*Curious White*.

The different kinds of Early Corn intended for boiling when young, or others as curiosities, may be planted in the garden the last week in April, in hills four feet apart, or in drills. If some of each be planted in separate beds at the same time, it will come in for the table one after the other in regular succession. After this, if any particular kind be preferred, it may be planted at different plantings in May and June. If the ground be poor, mix a shovel full of old manure with the earth in each hill before the seeds are planted, and after the plants are up strong, scatter a tea-cup full of wood ashes around each hill. This, with attentive hoeing and hilling will cause it to produce ears early. Deep digging between the hills is very beneficial when the corn is about eighteen inches high.

LEEK—*Allium Porrum.*

VARIETIES.—*Large Scotch or Welch Flag*—*London*.

This is a wholesome and useful herb, and is so hardy as to endure the extremes of heat and cold without injury. The seed may be sown in March or early in April, on a bed of rich earth, either broad cast, or in drills an inch deep. If the ground be kept loose and clean, the plants will be large enough to transplant in June or early in July, and should be set out in good ground in rows twelve inches assunder, and the plants five or six inches

apart in the rows. They will grow well in a warm border, which at this season is useless for many kinds of vegetables. After the plants have taken root they should be frequently hoed and kept free from weeds.

Those who wish to have leeks blanched, may plant them in trenches three or four inches deep, and as the plants progress in growth the earth should be drawn into the trenches.



LETTUCE.—*Lactuca.*

VARIETIES.—*Early Curled Silesia*—*Large Green Head, or Cabbage*—*Imperial*—*Hardy Green*—*Brown Dutch*—*Grand Admiral*—*Madeira, or Passion*—*Tennisball, or Rose*—*Drumhead*—*Magnum Bonum Coss*—*Ice Coss*—*White Coss or loaf*—*Green Coss.*

The seeds of the Hardy kinds of Lettuce may be sown from the first to the middle of September in rich ground free from weeds; it answers very well sown with Spinach, and should be covered over with straw at the approach of severe weather. These plants, if transplanted into warm borders, or in the open ground as early in March as the weather permits, will produce fine heads early in May. The best of the tender kinds may be raised early, by sowing the seeds in hot beds the first week in March, which being transplanted into good ground, will produce fine heads before the approach of warm weather. The other kinds may be sown in warm borders in March or April and transplanted in May. The Coss.

Lettuce requires to be blanched; this is done by gathering up the leaves of the plants, and tying bass round them when grown to perfection.

All kinds of Lettuce intended for heading, should be planted into good ground twelve inches distant from each other every way; the plants should be carefully hoed every other week during their growth; the first hoeing should be done in about two weeks after they are transplanted.

If head Lettuce be required at other seasons than the spring, it may be obtained in the fall by sowing the seed in August, or in the winter by means of a garden frame and glazed sashes.



MELON.—*Cucumis Melo.*

VARIETIES.—*Green Citron*—*Murray's Pine Apple*—
Persian—*Nutmeg*—*Large Cantaleupe*—*Pomegranate, or Musk Scented*—*Star*, (a few extra kinds from Europe in 25 cent papers.)

The Melon is an exotic plant, growing wild in Asia. It is cultivated in all the warm countries of Europe, and also in Africa and America, where its salubrious and cooling fruit is greatly esteemed.

For the varieties of the Musk or Canteloupe Melons, prepare a piece of rich ground the first week in May, manure it, and give it a good digging; then mark it out into squares of six feet every way; at the angle of every square dig a hole twelve inches deep and eighteen over, into which put seven or eight inches deep of old rotten dung, throw thereon about four inches of earth, and mix the dung and earth well

with the spade, after which draw the remainder of the earth over the mixture, so as to form a round hill about a foot broad at top. When your hills are all prepared as above, plant in each towards the centre, eight or nine grains of good melon seed, distant two inches from one another, and cover them about half an inch deep. When the plants are up and in a state of forwardness, producing their rough leaves, they must be thinned to two or three in each hill; draw earth from time to time round the hills, and as high about the roots of the plants as the seed leaves. As soon as the plants spread into branches, they should be stopped, by pinching off the top of the first runner bud as directed for Cucumbers; after which keep the ground perfectly free from weeds by frequent hoeings.

Those who wish to raise Melons in perfection, must be careful to plant them remote from an inferior sort, also from Cucumbers, Squashes, and Gourds; as degeneracy will insallibly be the consequence of inattention to these particulars. To prevent the ravages of flies &c. see Cucumber.

WATER MELON.—*Cucurbita Citrullus.*

VARIETIES.—*Carolina Water*—*Long Island Water*—*Apple Seeded Water.*

The Water Melon, though by some considered a species of the former, is a distinct genus of exotic plants. They afford a very refreshing article of diet in our warm summers. Dr. Pallas, in the account of his journey to the Southern provinces in Russia in 1793 and 94, speaking of a colony of

Moravians at Sarepta, or Sapa on the river Volga, says, "the ingenious inhabitants of this town brew a kind of beer from their very abundant and cheap Watermelons, with the addition of hops; they also prepare a conserve or marmalade from this fruit, which is a good substitute for syrup or treacle."

In order to have Water Melons in good perfection, you must fix upon a piece of very rich light soil; prepare, sow, and manage it in every respect as is directed for the others, only let the hills be nine or ten feet distant every way.



MUSTARD.—*Sinapis*, &c.

The *Alba* or White Mustard grows spontaneously in the fields in England, it is also cultivated as a small salad, as well as for seed. The seed yields from every 100 pounds, from 33 to 36 pounds of sweet mild oil.

The *Nigra*, or Common Mustard, is also a native of England. The condiment, called mustard, and in daily use at our tables, is prepared from the seeds of this species.

The *Erysimum* is a genus of plants comprising ten species, four of which are natives of Britain.

1. The *Officinale*:—This species possesses a warm and acrid flavour; and when cultivated is used as an early pot herb. Its seeds taken internally promote expectoration, the discharge of urine, and other fluid secretions. The juice has been employed with unparalleled success in ulcers of the throat, &c.

2. The *Barbarea* or Winter Cress is used as a salad in spring and autumn : some boil them as Kale.

3. The *Aliari* is also cultivated as a salad. The Prussians eat the leaves in the spring with salted meat. In Wales it is frequently used as a frying herb, and in England the leaves are used with Lettuce, &c.

4. The *Cheiranthoides* is eaten by horses, cows, goats, sheep and swine ; and is used by the country people for destroying worms.

The seeds of all the kinds of Mustard may be sown in clean rich ground in April and May ; and for a fail salad in September, in shallow drills.



NASTURTIUM.

There are of the Nasturtium a major and a minor kind ; the former being of a large running growth is the most productive. The seeds of the running kind should be sown in April or early in May, in drills about an inch deep, near fences, or pales ; or trellises should be fixed on which they can climb and have support ; for they will always be more productive in this way than when suffered to trail on the ground. The dwarf kind may be planted in hills, two or three seeds in a hill.



OKRA.—*Hibiscus esculentus*.

The green capsules of this plant are used in soups, and its ripe seeds, if burnt and ground like coffee, can scarcely be distinguished therefrom.

The seed should be planted in good rich ground, the first or second week in May. Draw drills about two inches deep, and four feet assunder, into which drop the seeds at the distance of six or eight inches from one another, or rather drop two or three in each place, lest the one should not grow, and cover them near an inch in depth, as they advance in growth thin them out, earth them up two or three times, and they will produce abundantly.

ONION.—*Allium Cepa.*

VARIETEIS.—*White Portugal*—*Yellow Dutch*—*White Spanish*—*Silver Skinned*—*Strasburgh*—*Large Deptford Red.*

Of the several varieties of Onions, the Strasburgh and Large Deptford Red are the best for a general crop. The bulbs are handsome, of firm growth, and keep well through the winter. The White Portugal and Silver Skinned Onions are of a mild taste, and generally turn out very profitable crops.

Previous to sowing onion seed for a general crop, the ground should be well prepared by digging in some of the oldest and strongest manure that can be got. The earlier this be done in the spring the better; and the planting should not be delayed longer than the middle of April. The seed may be sown broad cast, or in drills one inch deep and twelve inches apart. When the plants are up strong they should be hoed. Those beds that are to stand for a full crop, should be thinned out while young, to the distance of two or three inches from each other; if a few should

be required for use after this, those can be taken which incline more to tops than roots, and if the beds be frequently looked over and the small and stalky plants taken away where they stand thickest, the remaining bulbs will grow to a larger size. The ground should be hoed at least three times in the early part of their growth; but if the season proves damp, and weeds vegetate luxuriantly, they must be removed by the hand, because, after the onions have begun to bulb, it would be improper to stir them with a hoe.

When the greenness is gone out of the tops of Onions it is time to take them up, for from this time the fibrous roots decay. After they are pulled they should be laid out to dry; and when dry removed to a place of shelter.

The small Onions may be planted in the spring following; even an Onion which is partly rotten will produce good bulbs if the seed stems be taken off as soon as they appear.

The *Allium Fistulosum* or Welsh Onions are cultivated for spring salad; they form no bulbs, but are very hardy. If the seed be sown early in September in rich ground, although the tops may die down in the Winter, yet the roots will continue sound and push up new leaves early in the spring.

The *Allium Canadense*, or Tree Onion, is propagated by planting the bulbs in spring or autumn, either the root bulbs, or those produced on the top of the stalks; the latter, if planted in the Spring, will produce fine Onions. These may be planted in rows with a dibble, the same as Shallots.

The *Potato Onion* is of late introduction into this country. It does not produce seed as other Onions, but is increased by the root. One single Onion will produce six or seven in a clump under ground similar to Potatoes.

The bulbs should be planted in the spring from twelve to eighteen inches apart.



PARSLEY.—*Apium Petroselinum*

VARIETIES.—*Curled*, or *Double*—*Siberian*—*Hamburg* or *Large rooted*—*Dwarf Curled*.

As Parsley seed sown late in the season is apt to lay in the ground some time before it vegetates, the general crop should be sown by the early part of April, in drills an inch deep, and one foot asunder. After the plants are up, let them be kept clean by frequent hoeings. In order to have Parsley green through the winter, the old leaves should be picked off in September. If some of the roots be taken up early in November, and laid in a frame or light cellar, the leaves will keep green a long time; the remainder may be covered up with straw in the place where it grows.



PARSNIP.—*Pastinaca Sativa*.

VARIETIES—*Large Dutch*, or *Swelling*.

Parsnip seed may be sowed from the middle of March to the last week in April, in drills one inch deep and fourteen inches apart; but as this vegetable requires the whole season to grow in, the sooner the

seed is planted the better. Parsnips grow best in a deep soil manured well the preceding fall. Sow the seeds thick along the drills, and rake them in evenly.

When the plants are two or three inches high, thin them to the distance of six or eight inches in the rows. They should be kept free from weeds by regular hoeings through the summer; and in the fall they will be fit for use.



PEPPER.—*Capsicum.*

VARIETIES.—*Long or Cayenne—Tomato or Squash Shaped—Bell or Ox Heart—Cherry—Bird or West Indian.*

The seeds of the different kinds of Capsicums may be sown in a hot bed in March or on a warm border early in May. The plants may be afterwards transplanted into good rich ground from eighteen inches to two feet distant from each other.

Those who do not want peppers early in the season, may sow the seeds in the open ground in May, in drills two feet assunder, and half an inch deep. When the plants are grown an inch or two high, thin them to the distance of fifteen or eighteen inches in the rows. The ground should be afterwards hoed deep round the plants, and kept free from weeds by repeated hoeings.

PEAS,—*Pisum sativum*,

VARIETIES.—*Early Washington* (or *May Pea*,) grows to the height of 2 1-2 feet—*Early double blossomed frame*, 3 feet—*Early Nimble Dick* 2 1-2 feet—*Early Frame* 2 1-2 feet—*Early Golden Hotsur*, 3 feet—*Early Charlton*, 3 feet—*Early Petersburg* 2 1-2 feet—*Dwarf Blue Imperial*, 2 feet—*Dwarf Blue Prussian* 2 1-2 feet—*Dwarf Prolific*, or *Poor Man's*, or *Strawberry* 1 1-2 feet—*Dwarf Spanish or Fan*, 1 foot—*Dwarf Marrowfat*, 3 1-2 feet—*Dwarf Sugar*, (eatable pods) 3 feet—*Dwarf White Albany*, 1 1-2 feet (*Field Pea*)—*New Nonpareil*, 3 feet—*Ladies finger Marrows*—*Waterloo Blues*, 4 feet—*Matchless* or *true Fall Marrowfat*, 6 feet—*Large Gray Rounival*, 4 feet—*Dutch Gray*, 2 1-2 feet—*Knights Tall Marrows* or *Honey Pea*, 6 feet—*Knights Dwarf Marrows*, 2 feet—*Tall Crooked Podded Sugar*, 6 feet, (eatable pods)—*Dwarf Green Albany* 1 1-2 feet (*Field Pea*.)

The above list and description of the most esteemed kinds of Peas is taken from the Catalogue of the Messrs. Thorburn and Son's of New York. If they are rightly described, they will grow to different heights according to soil and season. This description however, may serve as a guide for the gardener in planting. The Dwarf Peas requires less distance between row and row, and shorter sticks than the tall kinds.

Planting the early kinds of Peas should commence as soon in the spring as the ground can be brought into good condition: all the other sorts as

well as the early will answer for successive crops ; to obtain which a few of the most esteemed kinds should be planted at the same time every two weeks, from March until the end of May. Persons desirous of having Peas throughout the summer and fall, may plant a few in June, July and August. The Peas should be then soaked in soft water five or six hours before planting, and if the ground be dry it should be watered in the drills.

Gardeners practice different modes of planting Peas ; some plant them in ridges, others in drills, some in single rows, others in double, some use sticks for the dwarf kinds, and others not ; those who study neatness will have them all rodded though the most dwarfish may do without.

All the different sorts of Peas may be planted in double or single rows from four to six feet apart according to the different heights they may be expected to grow. If two drills be made three inches deep, and six or eight inches apart, and the seed dropped along each drill moderately thick they will yield better than single rows, and will save sticks. When the plants are two or three inches high let them be hoed, drawing at the same time a little earth up to their stems, when they get to double that height let them be hoed again, at the same time place a row of sticks in the middle of your double rows, and a few shorter and smaller ones on the outside of each row, to assist the Peas in climbing to the main support. You must be governed as to the length of your sticks by the description of your peas. There is a great advantage in having sticks of a suitable height, to the various kinds of Peas ; the sticks should not only be

sufficiently tall but also branchy, that the plants may readily take hold ; and they should be prepared fan-fashion, so that the side branches may extend only along the rows. As the plants progress in growth, let them be repeatedly hoed and earthed up, this will promote a plentiful bearing.

POTATOES.—*Solanum Tuberosum.*

The varieties of Potatoes being very numerous, it is unnecessary for me to point out any particular kinds. Some of the earliest should however, be planted first in the spring, to produce young Potatoes in due season, but they are not so suitable for a full crop as the late varieties.

Potatoes being of such extensive utility, various expedients have been contrived with a view to find out the best method of preparing the seed. In many parts of England (where Potatoes equal to any in the world are raised,) the farmers never plant Potatoes whole, they take the Potatoes as they come to hand, and in cutting them take care to have two good eyes in each set, the small Potatoes are deprived of the sprout or nose end as it is generally considered that this is essentially necessary to the production of a good crop. I have frequently known from five to 600 bushels raised from an acre with small Potatoes alone, cut in this way. Some prefer planting the Potatoes immediately after they are cut ; the better way is to get them cut one or two weeks before the time of planting, and to lay them out on a barn or garret floor to dry.

Potatoes may be planted from the first week in April until July, either in hills or drills ; the best way

for a garden is to plant them in drills four or five inches deep, and about thirty inches asunder, the sets may be dropped six or eight inches apart and if a small quantity of combmaker's horn shavings or sea weed be used as a manure for the early kinds, it will expedite their growth; the ground should be hoed as soon as the plants come up, and as they progress in growth it will be proper to mould or earth them up twice.

POTATOE SWEET.—*Convolvulus Batata.*

Sweet Potatoes may be raised in the vicinity of New York, by means of a hot bed; they should be planted whole, early in April three or four inches deep and about the same distance apart. In about a month they will throw up sprouts. When these are three inches above ground, part them off from the Potatoe, which if suffered to remain will produce more sprouts for a successive planting; transplant them into rich ground in rows four feet apart and the plants about a foot apart, in the rows. Keep them clear of weeds until the vines begin to cover the ground, after which they will grow freely.

PUMPKINS.—*Cucurbita pepo.*

VARIETIES.—*Large Cheese—Connecticut Field—Finest Yellow Family—Mammoth.*

Pumpkins are planted in hills which require to be eight or ten feet apart, two or three plants will be sufficient in each; they are not so tenacious of a particular soil as either Melons or Cucumbers, but

will grow freely in any dry and tolerably rich ground ; the seed may be planted early in May in the open ground, and should be kept constantly clean and free from weeds.

When you intend to cultivate either Melons, Cucumbers, Squashes, Pumpkins, or the like kinds, on an extensive scale, you can prepare the ground with the plough, which will save much labour ; and also, afterwards as the weeds advance, plough and harrow between the plants till they begin to run, after which, the hoe must be used.

PATIENCE DOCK.—*Rumex Patientia*.

The *Rumex Patientia* is perennial ; the leaves are large, long and succulent, and are by some very much esteemed. The plant may be propagated by offsets from the root, taken off in the spring, or late autumn months, and planted in rows eighteen inches asunder, and eight inches from one another in the rows. If the seed be sown in October or November, it will rise freely in the spring, or it may be planted in March or April, in drills one inch and a half deep, and eighteen inches apart, and afterwards thinned to the proper distance.



RADISH.—*Raphanus*.

VARIETIES.—*Early Frame*—*Early Scarlet*—*Short Top*—*Long Salmon*—*Purple Short Top*—*Long White Summer, or Naples*—*Cherry or Scarlet Turnip rooted*—*Violet coloured Turnip*—*White Turnip rooted*—*Black, Fall or Spanish*.

Those who are desirous of having good Radishes early in the spring, should have a warm border pre-

pared in the very best manner, so as to be ready to sow some of the short top scarlet by the middle of March. If the ground should not be in good condition to receive the seed at this time, let it be delayed a few days ; and by the first of April take care to have another bed prepared in the open ground, by digging in some good strong manure. The seed may be sown broadcast, and raked evenly in. If you wish to have Radishes in regular succession, sow seeds of the most esteemed kinds every two weeks until the middle of May : if any be sown after this, it should be the White Turnip or Black Spanish, these will endure the heat better than the others, and may be sown in drills in small quantities throughout the summer, until the latter end of August, when the other kinds may be sown in regular succession until the first of October.

ROCAMBOLE.—*Allium Scorodoprasum.*

This and the **Allium Sativum** or **Common Garlick**, is raised in some gardens. Many people consider the Rocambole to be of a milder and better flavour, but the bulbs are not so large as those of the Garlick.

This is a very hardy plant, and will grow in almost every soil or situation. It is propogated either by the roots or seeds, the former ought to be separated and planted, at the same time, and in the same manner as Shallots.

When raised from seed, they may be sown in drills either shortly after the seeds are ripe, or in the succeeding spring ; they require only to be kept clear of weeds ; and, in the following autumn, may be taken up, the bulbs parted, and planted as before.

RHUBARB.—*Rheum.*

Rhubarb is a genus of exotic plants, comprising seven species, of which the following are the principal:—

1. The *Rhuponticum* or Common Rhubarb, a native of Thrace and Syria, which has long been cultivated in British gardens for the footstalks of the leaves, that are frequently used in pies and tarts.

2. The *Rheum Undulatum* is also cultivated for the same use.

3. The *Palmatum* or True *Officinale* Rhubarb, is a native of China and the East Indies, whence its culture has been introduced into Europe; it produces a thick fleshy root, externally yellowish brown, but internally of a bright yellow colour streaked with red veins. It grows to good perfection in Scotland as far North as Perthshire, (Lat. 56;) also in England, Turkey, and various other parts of Europe. When the importance of this root is considered as a medicine, it is a matter of astonishment that it has not been more generally introduced into the United States.

The several kinds of Rhubarb may be propagated by offsets, taken from the roots early in the spring; or from seed sown late in the fall, or in March and the early part of April. The indispensable points to the production of good roots of the *palmatum*, are depth and richness of soil, which should be well pulverized before the plants are set out. Prepare beds of fine mould eighteen inches deep; in these put in the plants from the seed bed, ten or twelve inches apart; this must be done when they have attained the height of four or five inches, and have thrown out as many leaves:

The first season is the most critical, and much care is necessary. If the weather be hot, the nursery must be shaded, and at all events continually watered; for water, *though hurtful to old plants*, is now of the first consequence. Wet weather is the most proper time to plant in. The beds must be kept free from weeds through the summer, and on the approach of severe weather, covered up with dry litter. In the early part of the spring this must be taken off, and in the beginning of April the plants must be transplanted into ground dug and prepared as directed for Asparagus. Those who cultivate the *Palmatum* for the sake of the roots, should dig the ground two or three spades deep, and place the plants four feet apart every way. As to the other kinds it is not so particular, so as the plants have room to grow. In the early part of November, the leaves being then decayed, the beds should be covered with dry litter; before this be done, a little earth should be drawn round the crowns of the plants. If there be any danger of water lodging, make trenches to carry it off. In the month of March the beds should be stripped of their covering, and the ground well hoed and cleared of weeds. If Rhubarb stalks be required for use early in the spring, they may be obtained by placing flower barrels or deep tubs over some of the plants, and covering them up with fresh stable dung. Some make the beds at once with the seeds; the objections to this plan are, first, that the young plants cannot be so well protected in the early part of their growth as those raised in small beds; and, secondly, that the ground becomes so hard in the course of a year as to

prevent the roots from running to the depth they otherwise would.

The roots of the Palmatum must not be taken up until six or seven years old. The stalks of the other kinds may be cut every spring. After being stripped of their outer covering and cut up into small pieces, they are used in pies and tarts. Cobbet supposes, "that a hundred wagon loads of Rhubarb stalks are annually sold in the markets of London, at a shilling sterling per bunch." (American Gardener.) Rhubarb makes an excellent preserve when cut into small pieces about an inch and a half long, and parboiled with sugar.

Oyster

SALSIFY.—*Tragopogon Porrifolium.*

This plant grows spontaneously in the open fields in England, and is by some highly valued for its white eatable root, and for the young shoots rising in the spring from plants a year old; these, when gathered while green and tender, are good to boil and eat in the manner of Asparagus. Some have carried their fondness for this plant so far as to call it Vegetable Oyster. They require the same kind of soil and management as Carrots and Parsnips. The seeds may be sown the latter end of March, or early in April, an inch deep in drills twelve inches apart. When the plants are two or three inches high, they should be thinned to the distance of six inches from each other, and afterwards hoed. The ground should be kept clean and loose round the plants, by repeated hoeings; and in the Autumn they will be fit for use. The roots may be taken up late in the fall, and so-

cured in moist sand from the air ; or be suffered to remain out, and dug up when wanted.

The mode of cooking recommended by an American author is, "to cut the roots transversely into thin pieces ; boil them in water or milk and water ; when boiled soft, mash them and thicken the whole with flour to some degree of stiffness ; then fry them in the fat of salt pork or butter ; they are a luxury." In England the tops are boiled and served up with poached eggs.



SCORZONARA.—*Scorzonera Hispanica.*

This plant has long been raised in British gardens for culinary purposes, and especially as an ingredient in soups, on account of its palatable and nourishing roots. Some boil and eat them like Carrots, &c. ; in which case they should be deprived of their rind, and immersed in cold water for half an hour, or they will be bitter. They are raised precisely in the same manner as Salsify. If the seed be sown in April, in a good deep soil, the roots will attain perfection in autumn, and continue good all the winter. They last from three to four years, according to the quality of the earth and care bestowed on them, but it is better to raise a few from seed every year.

SEA-KALE.—*Crambe maritima.*

This plant is found on the sea shore in the Southern parts of England, where it grows spontaneously. As soon as it appears above ground, the inhabitants

remove the pebbles or sand with which it is usually covered to the depth of several inches, and cut off the young and tender leaves and stalks, as yet unexpanded, and in a blanched state, close to the crown of the root, it is then in its greatest perfection. When the leaves are full grown they become hard and bitter, and the plant is not eatable.

It is cultivated in private gardens and for sale in various parts of England. Cultivators have differed widely respecting the mode of treating this plant, many conceiving that stones, gravel, and sea sand are essential to its growth, have gone to the expense of providing it: but it has been discovered that it will grow much more luxuriantly in a rich sandy loam, where the roots can penetrate to a great depth.

The seeds of Sea-Kale should be sown as soon as they are ripe. If fresh seeds cannot be obtained by the end of October, let them be sown as early in the spring as the ground can be brought into good condition, in drills an inch and a half deep, and fourteen or sixteen inches asunder; the plants should be afterwards thinned out to the distance of six or eight inches from each other in the rows, and kept clear of weeds by frequent hoeings through the summer. When the plants are a year old, every third row may be taken up, and also every other plant in each row, leaving them fourteen or sixteen inches apart; these may be transplanted into good ground prepared as directed for Asparagus. Plant two rows in each bed, about eighteen inches apart; the best way is to make two drills three inches deep, and with a dibble set in the plants fifteen or sixteen inches from each other; when these drills are filled, the crowns of

the plants will be covered nearly two inches, but they will soon push through the earth. The plants left in the seed bed may form a permanent bed, which should be forked or dug between the rows ; previous to this being done, lay on an inch or two of good rotten manure, and incorporate it with the earth around the plants.

Some make new plantations with pieces of old roots, which should be cut up in lengths of about two inches, and planted in March or April, three or four inches deep at the distances before directed for the plants.

At the approach of winter, the leaves will die away and disappear. The beds should be then thickly covered with dung, leaves or sea weed ; this will not only protect the plants from frost, but will cause them to shoot up early in the spring. As soon as the frost is out of the ground, this may be taken off, or if well rotted, it may be mixed up with the earth ; the crowns of the plants should then be covered to the depth of ten or twelve inches for blanching.

Some blanch it by heaping on it sea sand ; some common sand and gravel ; and others with large garden pots inverted, and placed immediately over the plants. If these pots be covered up with fresh horse dung, it will forward the shoots in growth, and make them sweeter and more tender.

When your plants have been covered in either method three or four weeks, examine them, and if you find that the stalks have shot up three or four inches, you may begin cutting ; should you wait till all the shoots are of considerable length, your crop will come in too much at once, for in this plant

there is not that successive growth which there is in Asparagus ; you may continue cutting until you see the head of flowers begin to form ; and if at this time you uncover it entirely, and let it proceed to that state in which Brocoli is usually cut, and use it as such, you will find it an excellent substitute ; and this greatly enhances the value of the plant, as Brocoli does not stand our winter frost, and can only be had when carefully protected, (as recommended under that head;) but this plant is sufficiently hardy to bear our winter's frost without much injury. You are not to weaken the roots too much by over cutting, for in that case it would injure their next years bearing ; some of the shoots should be allowed to grow to carry on a proper vegetation, to strengthen and enlarge the roots. Great care should be taken in cutting, not to injure the crowns of the roots by cutting the shoots too close to them. Sea-Kale should be dressed soon after it is cut, as the goodness of the article greatly depends on its not being long exposed to the air.

SORREL.—*Rumex Acetosa.*

The seeds of the Broad Leaved English Sorrel, and also of the Round Leafed or French Sorrel, may be sown in April and May, in beds or borders, and covered lightly. When the plants are up, keep them free from weeds ; they may be afterwards thinned to the distance of nine inches from each other, or transplanted into fresh ground.

The old standing roots of either kind may be separated and planted for increase ; this should be done

in April. As fast as the plants shoot up to seed cut them down close, and a new crop of leaves will be produced. It is used raw as a salad, or boiled for greens.

SKIRRET.—*Sium Sisarum.*

This plant is cultivated first by seed, and afterwards by offsets taken from the old roots, and planted very early in the spring, and before they begin to shoot, but it is best to raise a small bed from seed every year, as the roots grow longer than those raised from slips, and are less liable to be sticky. The seed may be sown in drills the latter end of March, or early in April, and managed the same as Salsify, Parsnips, &c. In Autumn, when the leaves begin to decay, the roots will be fit to use, and continue so till they begin to shoot in the spring.

Skirrets should be planted in a light moist soil, for in dry land the roots are generally small, unless the season proves wet. The root of the Skirret is composed of several fleshy tubers, as large as a man's finger, and joining together at top. They are eaten boiled, and stewed with butter, pepper, and salt, or rolled in flour and fried, or else cold with oil and vinegar, being first boiled. They have much of the taste and flavour of a Parsnip, but a great deal more palatable.

SHALLOT.—*Allium Ascalonicum.*

The true Shallot is a native of Palestine, and is considered to possess the most agreeable flavour of any of the Allium genus. It is consequently highly deserving of cultivation. They are propagated by planting bulbs or offsets in the fall of the year; which may be set out with a dibble, in rows twelve inches apart, by four to six inches distance in the rows; or they may be placed in drills two or three inches deep and covered up with a trowel or hoe. The gardeners about New York plant large quantities of the bulbs early in September; by this means they are enabled to supply the markets in April and May with a mild Allium which meets a ready sale.

After the tops die down, the bulbs must be taken up, and the offsets divided: a portion of these should be kept in a dry place to plant the ensuing Autumn.

SPINACH OR SPINNAGE.—*Spinacia.*

VARIETIES.—*Round Leaved, or Summer—Prickley or Fall—New Zealand, or Tetragona expansa.*

The *Spinacia Oleracea*, or common Spinach, is very hardy, the seed of which should be sown in several sowings from the first to the end of September; the forwardest of these, if covered up with straw at the approach of cold weather, will furnish greens for the table when other vegetables are scarce, and the latter crops will recover the effects of a hard winter, and produce a wholesome vegetable early in the spring.

If Spinach seed be sown in rich ground in March and April, it will grow freely, but it must be cut before the approach of hot weather, or it will run to seed.

It is altogether useless to sow Spinach seed in poor ground; let the ground be well manured, with good strong dung, and it will well reward you for your trouble by its abundant produce.

The New Zealand Spinach is of late introduction into this country; its nature seems to be opposite to the common Spinach, as it will endure the heat better than the cold. It may be obtained in the summer, by planting the seeds in April and May. Being of luxuriant growth, it should be planted in hills three feet apart, and about two seeds in a hill: The leaves will be fit for use during the summer, and until late in the fall.



SQUASH.—*Cucurbita melopepo.*

VARIETIES.—*Early Bush Summer—Summer Crook Neck—Long Crook Neck, or Bell Vegetable Marrow.*

The Early Bush Squashes are best for garden culture, and their produce is allowed to be equal in quality to the running kinds. The Vegetable Marrow is also well deserving of cultivation. The seeds of these may be planted early in May, in hills four or five feet apart, prepared as directed for Melons and Cucumbers. The Running Squash may be planted at the same time and in the same manner as Pumpkins; and the management of these various kinds of vines must be the same in every respect as

Cucumbers and Melons. It is always best to put five or six seeds in a hill, as a guard against accidents. When the plants are past danger they can be thinned to two or three in a hill.



TOMATOE.—*Solanum Lycopersicum.*

The Tomatoe, or Love Apple is much cultivated for its fruit in soups and sauces, to which it imparts an agreeable acid flavour ; and is also stewed and dressed in various ways, and very much admired.

The seeds should be sown the early part of March, in a slight hotbed, and the plants set out in the open ground the first week in May. In private gardens it will be necessary to plant them near a fence, or to provide trellises for them to be trained to, in the manner recommended for Nasturtiums ; they will however do very well if planted out four feet distant from each other every way.

Tomatoes may be brought to perfection late in the summer, by sowing the seed in the open ground the first week in May ; these plants will be fit to transplant early in June.

TURNIP.—*Brassica rapa.*

[Those marked f, are best for family use.]

VARIETIES.—*Early White Dutch*, f.—*Early Garden Stone*, f.—*White Flat or Globe*—*Green Round or Green Top*—*Red Round*, f. or *Red Top*—*Swans Egg*, f.—*Large English Norfolk*—*Long Tankard, or Hanover*, f.—*Long Yellow Foench*, f.—*Yellow Maltese*, f.—*Yellow Aberdeen*—*Yellow Stone*, f.—*Yellow Sweedish or Russia*.

This is a valuable vegetable and its culture generally very well understood. It being the last esculent vegetable on our catalogue, that is raised from seeds sold at our several seed stores, I shall endeavour to stimulate those of our Yeomanry who have hitherto neglected the culture of this field, as well as garden production, to exertion and diligence, by inserting a few short extracts from a paper that now lays before me. The following statement relates to a country that contains only about 60 millions of acres, capable of cultivation, and which supports upwards of 20 millions of human beings, besides millions of brutes from the products of its soil, she also exports vast quantities of some kinds of produce from this source.

“Culture of Turnips.—Until the beginning of the eighteenth century, this valuable root was cultivated only in gardens or other small spots for culinary purposes, but Lord Townsend, attending king George the first, in one of his excursions to Germany in the quality of Secretary of State, observed the Turnip cultivated in open and extensive fields, as fodder for cattle, and spreading fertility over lands naturally

barren ; and on his return to England, he brought over some of the seed, and strongly recommended the practice which he had witnessed, to the adoption of his own tenants, who occupied a soil similar to that of Hanover. The experiment succeeded ; the cultivation of Field Turnips gradually spread over the whole county of Norfolk, and has made its way into every other district of England. The reputation of the county as an agricultural district, dates from the vast improvements of heaths, wastes, sheep walks, and warrens, by enclosing and manuring; the fruits of the zealous exertions of Lord Townsend and a few neighbouring land owners, which were ere long imitated by others. Since these improvements were effected, rents have risen in that county from one or two shillings to twenty shillings an acre; a county consisting chiefly of sheep walks and rabbit warrens has been rendered highly productive, and by dint of management, what was thus gained, has been preserved and improved even to the present moment. Some of the finest corn crops in the world are now growing upon land, which, before the introduction of the Turnip husbandry, produced a very scanty supply of grass for a few lean and half starved rabbits.

“ Mr. Colquhoun in his ‘ Statistical researches,’ estimated the value of the Turnip crop annually growing in the united kingdom of Great Britain and Ireland at fourteen million pounds sterling, (equal to upwards of **SIXTY MILLIONS OF DOLLARS.**) But when we further recollect that it enables the agriculturist to reclaim and cultivate land, which without its aid, would remain in a hopeless state of natural barrenness, that it leaves the land clean and in fine condi-

tion, and also to insure a good crop of Barley and a kind plant of Clover, and that this Clover is found a most excellent preparative for Wheat, it will appear that the subsequent advantages derived from a crop of Turnips must infinitely exceed its estimated value as fodder for cattle. (Sir William Scott in the Quarterly Review.”)

As I have undertaken to “assist the Young Gardener,” I shall proceed to point out the most proper means of cultivating this truly valuable vegetable in his garden.

The preceding remarks show the kind of land that may be made capable of producing not only Turnips, but other things of equal value. It must however be granted, that some soils naturally suit particular kinds of vegetables better than others, and that in general, exotic plants will succeed best in such soils as are nearest like their own native soil. As we have not always a choice, I would inform the Young Gardener, if he has a very light soil which is not suitable for vegetables in general, he may sometimes get two crops of Turnips from it in one year, by sowing seed for the first crop early in March, and that for his second, in the middle of August. For general crops it will be better to have ground manured with short rotten dung, or compost containing a considerable proportion of coal or soapers ashes. Ground that has been well manured for preceding crops, and old ground fresh broken up, will suit well for Turnips.

The most esteemed kinds of Turnips for gardens, are marked in the catalogue, I shall therefore leave my readers to their own choice.

As the Yellow Swedish or Russian Turnip or Ruta Baga requires different treatment, I shall quote a few lines from the American Gardener, by William Cobbett, the great advocate for Ruta Baga.

"The Swedish Turnip, so generally preferred for table use here, and so seldom used for the table in England, ought to be sown *early* in June, in rows at a foot apart, and thinned to three inches in the rows. About the middle of July they should be transplanted upon ridges three feet apart (in a *garden*) and during their growth, ought to be kept clean of weeds, and to be dug between twice at least as deep as a good spade can be made to go." "But the Swedish Turnip is of further use as producing most excellent greens in the spring, and at a very early season. To draw this benefit from them, the best way is to leave a row or two in the ground, and when the winter is about to set in, cover them all over with straw or cedar boughs. Take these off when the winter breaks up, and you will have very early and most excellent greens; and when you have done with the greens, the Turnips are very good to eat."

If the seed of the Russia Turnip be sown either broadcast, or in drills the first week in July, they will make fine roots by autumn without transplanting, provided the ground be good and well worked. When the plants are up strong they must be hoed and thinned to the distance of 12 or 15 inches from each other, another hoeing will be necessary in 5 or 6 weeks afterwards. This will make them grow freely.

HORSE-RADISH—*Cochlearia Armoracia*.

This plant is propagated by cuttings from the root, either cut from the top an inch or two long, or some old roots cut into pieces of that length, or by offsets that arise from the sides of the main root, retaining the crowns or top shoots in as many parts as possible. These should be planted as early in the spring as practicable, in rows two feet apart, and six or eight inches from each other in the rows. The ground should be well manured and dug two spades deep, and the cuttings should be sunk full ten inches with the crowns upright; this being done, level the surface of the ground, and afterwards keep it free from weeds until the plants are full grown. With this management the roots will be long and straight, and the second year after planting will be fit for use. They may be taken up the first year, but then the roots will be slender, therefore it is the better way to let them remain till the second. If in taking up the roots some offsets be left in the ground, they will produce a successive supply for many years.

—
AROMATIC, POT, AND SWEET HERBS.

Anise,	<i>Pimpinella Anisum.</i>
Basil Sweet,	<i>Ocymum Basilicum</i>
Bush Basil,	<i>do. minimum.</i>
Borage,	<i>Borago Officinalis.</i>
Caraway,	<i>Carum Carni.</i>
Clary,	<i>Salvia Sclaræ.</i>
Coriander,	<i>Coriandrum Sativum.</i>

Dill,	<i>Anethum Graveolens</i>
*Fennel, Common,	<i>do. Foeniculum.</i>
* do. Sweet,	<i>do. Dulce.</i>
Marigold, Pot,	<i>Calendula Officinalis.</i>
*Marjoram Sweet,	<i>Origanum Marjorana.</i>
*Mint, Spear,	<i>Mentha Virides.</i>
* do. Pepper,	<i>do. Piperita.</i>
* do. Pennyroyal,	<i>do. Pulegium</i>
*Sage, Common,	<i>Salvia Officinalis.</i>
Savory, Summer,	<i>Satureja Hortensis.</i>
* do. Winter,	<i>do. Montana.</i>
Smallage,	<i>Apium Graveolens.</i>
*Tarragon,	<i>Artemisia Dracunculus.</i>
*Thyme, Common,	<i>Thymus Vulgaris.</i>
* do. Lemon,	<i>do. Serpyllum.</i>

Aromatic Herbs are such as impart a strong spicy odour and savoury taste; many of them are used as small pot herbs, and for sauces, stuffings, and other uses in cooking. As only a small quantity of these are necessary in private gardens, a bye corner may be allotted for them, and such medical herbs as may be wanted in a family.

It may be necessary for me to explain as we go along, that there are three principal descriptive names given to plants, namely, *Annuals*, *Biennials*, and *Perennials*. The *Annuals* being but of one season's duration, are raised every year from seed. The *Biennial* kinds are raised from seed one year, continue till the second, and soon after die; some of these should be also raised every year from seed. The *Perennials* may be also raised from seed, but when once raised they will continue on the same roots

many years. Those marked * are of the latter description, and may be propagated by suckers, offsets, cuttings or partings of the roots.

Those who have not already a plantation of these herbs, may sow seeds of any of the different kinds in March or April, in drills about an inch deep and twelve inches apart, each kind by itself. The plants may be afterwards transplanted into separate beds: or, if a drill for each kind be drawn two feet apart, the seed may be sown in them, and the plants afterwards thinned out to proper distances according to the natural growth of the different kinds of plants:

PLANTS CULTIVATED FOR MEDICINAL PURPOSES, &c.

Boneset or Thoroughwort,	<i>Eupatorium Perfoliatum.</i>
*Balm,	<i>Melissa Officinalis.</i>
Bean Castor-Oil,	<i>Ricinus Communis.</i>
Burdock,	<i>Arctium Lappa.</i>
Catnep,	<i>Nepeta Cataria.</i>
Celandine,	<i>Chelidonium Majus.</i>
*Chamomile,	<i>Anthemis Nobilis.</i>
*Comfrey,	<i>Sympyrum Officinale.</i>
*Elecampane,	<i>Inula Helenium.</i>
Feverfew,	<i>Matricaria Parthenium.</i>
*Horehound,	<i>Marubium Vulgare.</i>
*Horsemint,	<i>Monarda Punctata.</i>
*Hyssop,	<i>Hysopus Officinalis.</i>
*Lavender,	<i>Lavendula Spica</i>
Lovage or Smellage,	<i>Ligusticum Levisticum.</i>
*Mallow, Marsh,	<i>Althea Officinalis.</i>

*Pink root Carolina,	<i>Spigelia Marilandica.</i>
Poppy Opium, (annual,)	<i>Papaver Somniferum.</i>
*Rosemary,	<i>Rosmarinus Officinalis.</i>
*Rue Garden,	<i>Ruta Graveolens.</i>
*Scullcap or Mad Dog Plant,	<i>Scutellaria Lateriflora.</i>
*Snakeroot, Virginian,	<i>Aristolochia Serpentaria.</i>
*Southernwood,	<i>Artemisia Abrotanum.</i>
*Speedwell Virginian,	<i>Veronica Virginica.</i>
*Spikenard,	<i>Aralia Racemosa.</i>
*Tansey,	<i>Tanacetum Vulgare.</i>
*Wormwood,	<i>Artemisia Absinthium.</i>

The generality of Aromatic, Sweet, and Medicinal Herbs, may be raised from seeds sown in March and April. The greater part of the above described plants are Perennial, and will multiply from seeds they drop, or from partings of the roots. The offsets, roots, or young plants thus raised, should be planted at suitable distances from each other early in the spring. The beds should be afterwards kept free from weeds, and as the herbs come into flower, they should be cut on a dry day, and spread in a shady place to dry for winter use. In the month of October the beds should be examined. Lavender, Rosemary, and other tender herbs should be taken up, potted and placed in a frame or green house for the winter. Thyme, Hysop, Winter Savoury, Southernwood, Sage, Rue, and the like will require their tops to be neatly dressed ; and Pot Marjoram, Burnet, Tarragon, Tansey, Pennyroyal, Sorrel, Chamomile, Fennel, Horehound, Mint, Lovage, and other kind of hardy Perennial herbs, should be cut down close to the ground. After this it will be proper to dig lightly and loosen

the ground between the roots of the shrubby plants ; but the beds of close-growing running plants, such as Mint, Running Thyme and all other creeping herbs, will not well admit of digging ; therefore, after the stalks are cut down, and the beds cleared of weeds, dig the alleys and strew some of the loose earth evenly over the beds ; and if the ground be rather poor or light, a top dressing of very rotten dung will be of considerable service.

This dressing will give proper nurture and protection to the roots of the plants, a neat appearance to the whole, and in spring the shoots will rise with renewed vigour.

CONCLUDING DIRECTIONS.

Having finished the catalogue, I proceed to give directions for making the most of a piece of ground well manured for early crops. In the general directions at the commencement, I observed that good rich manure was indispensably necessary to the production of some particular kinds of vegetables ; it may be further observed, that rich ground will produce two or three valuable crops, but it requires some attention to make use of it to the best advantage. If the gardener have leisure to dig his ground in March or April, that he intends for Beans, Cucumbers, Tomatoes, Egg-Plants, or other tender plants, he may raise Radishes, Spinach, Lettuce, or other Salads on it, by leaving a space for his hills or drills ; or radish seed may be sown lightly over beds of Beets, Carrots or Parsnips, but they must not be suffered to run to seed, as this would injure the other plants. When the first crops are gathered, it requires a little consideration before a second is planted, in

order that a sufficient quantity of the best of the ground be reserved for the most particular and valuable kinds of vegetables. That I may be understood, I have adopted the following plans, representing beds of earth, this will answer the same purpose as bringing my readers on the ground :

No. 1. The following lines represents drills six inches apart :

March 25.—Sow Leek, Parsley, or Celery, &c.

Do. Radish Seed,

Do. Leek, Parsley, or Celery, &c.

The Radishes being pulled early in May, leaves the intermediate ground for the other plants.

No. 2. Drills 10 or 12 inches apart—

April 1.—Sow Spinach or Radish Seed.

24.—Plant early Cabbage Plants.

1.—Sow Spinach or Radish Seeds.

By the time the Cabbages requires the whole of the ground, the Spinach or Radishes may be gathered.

If this bed be cleared of the second crop by the middle of July, it may be planted with Celery, Turnips, or Black Radishes. If the Cabbages be of the

late heading kinds, the ground may be reserved for the first sowing of Spinach, Fetticus, Lettuce, &c. in which case it will require a fresh coat of manure.

No. 3. Rows or drills 14 inches apart :

March 20.—Plant Hardy Lettuce Plants.

Do. Hardy Lettuce Plants.

Hoe them the first week in April—previous to hoeing the second time, draw a drill between each row of plants, and plant beet or carrot seed ; this may be covered up in hoeing the Lettuce, and by the time the plants are up strong, the Lettuce will be fit to cut.

If these roots are well attended to, they may be cleared off soon enough to produce fall Cabbage, Leeks, Celery, Turnips, Black Radishes, &c.

No. 4. Rows or drills 16 inches apart :

March 25.—Plant Hardy Lettuce Plants.

Do. Hardy Lettuce Plants.

April 20.—Plant early York Cabbage Plants, either between the rows or between the Lettuce.

As soon as the Lettuce is off, hoe the Cabbage and it will soon cover the ground.

This ground will be suitable for a crop of any of the kinds above mentioned, except Cabbage, the roots of which are apt to get defective, if the same ground be planted with Cabbage twice in succession.

The above, or preceding plans, present a fair specimen of what may be done on a small piece of good ground. If the young gardener will take the trouble to keep an account of his transactions, he would soon make discoveries of still greater importance. If he be not sufficiently acquainted with the different kinds of Cabbage Plants, for instance, so as to distinguish one from the other, he, by making a memorandum of the time of sowing the seed, would soon get acquainted with the different kinds of plants ; he would also discover the difference in the growing of his seeds, and know who to blame if any particular kind should not come up.

The following represents a hot bed with four sashes, sown March 1st.

No. 1. Thorburn's Early York Cabbage Seed.	No. 2. Smith's Early Battersea Cabbage seed.
No. 3. Russell's Early Lettuce seed.	No. 4. Bridgeman's Tomatoe and Egg-Plant seeds in shallow drills.

It may be necessary to remind my readers of the necessity of being always prepared to sow Cabbage, Egg-Plant, Lettuce, and Tomatoe seeds in hot beds the last week in February or early in March, for this purpose, let some fresh stable dung and rich compost be engaged beforehand. Some gardeners make their beds on the level ground, but it is always safest to make a pit from eighteen inches to two feet deep : in order to do this, a heap of dung should be deposited on the ground intended for the beds before the frost sets in ; by this means the ground will be preserved from frost, and good earth may be obtained from the pits without any difficulty.

The fresh dung should be spread regularly in the pits to the depth of twenty to twenty four inches ; as soon as the dung begins to heat, cover it with six or eight inches deep of mould ; then lay on the sashes, and protect the beds from the inclemency of the weather. In two or three days the rank steam may pass off, it will then be necessary to stir the mould before the seeds be sown, to prevent the growth of young weeds that may be germinating ; then sow the seeds as equally as possible, reserving a small quantity of the warm mould to be sown or sifted over the seeds. The beds should be afterwards attended to as directed for Brocoli and Cauliflower. This description of a hot bed is intended expressly for the raising of spring Cabbage, Lettuce, Tomatoes, and such other plants as may be required for early planting. Beds made earlier in the season, or for forcing, will require a greater substance of manure.

Were I disposed, I might extend this work to double its bulk, but I must as I have hitherto done;

confine myself as nearly as practicable to the object mentioned in my preface. If another edition should be called for, I shall direct the attention of my fellow citizens more at large, to the advantages that may be derived from forcing vegetables. The following simple method of forcing vegetables on a small scale, is recommended by a correspondent of the London Magazine for June 1828.

“Mushrooms in winter I obtain by a very simple though not a new process. Provide boxes three feet long, and one foot eight inches deep; a quantity of horse droppings, perfectly dry; some spawn and some light dry soil. Fill the boxes by layers of droppings, spawn, and soil, which must be trodden perfectly tight; repeat these triple layers till the boxes are full, and all trodden firmly together.

Four such boxes at work, are sufficient for a moderate demand; and of a dozen, four brought on at a time, and placed upon the flue of a *greenhouse* stove, will produce a fine supply. The surface of these portable beds may be covered with a little hay, and occasionally, though sparingly, watered. It is not absolutely necessary that they be set on the flue of a hot house: the *kitchen cupboard*, or any other similar place, will suit equally well. This plan is also convenient for affording a plentiful stock of superior spawn.

The same sized boxes will also do for *Asparagus*; but for this purpose a sufficient stock of three year old plants must be at hand; also eighteen boxes, four of which are the necessary set to be forced at one time for a middling family. Half fill the boxes with decayed tanners bark, leaf mould, or any other

similar mould ; on this, pack in the roots as thickly as possible, and fill up the boxes with the bark, &c. Any place in a forcing house will suit them ; on the flue under the stage, or in short, any place where they can enjoy the necessary degree of heat. Besides Asparagus and Mushrooms, Sea-Kale, Rhubarb, Buda Kale, Angelica, Small Salad, as also other pot herbs, may be raised in the same manner."

Those who have not the conveniences recommended in a greenhouse, &c., may place the boxes in a hot bed. The glasses being laid on and the beds covered at nights, will soon promote the growth of the plants, and produce vegetable luxuries at a season when garden products in general are comparatively scarce.

It is unnecessary to show of how much value such processes may be in minor establishments, or in a young country. I wish it to be understood, that in order to the successful cultivation of some of the rare vegetables I have treated of, great pains must be taken in every stage of their growth. If the advice I have given be attended to, I flatter myself we shall soon obtain a supply of many of these luxuries of the garden. My directions are founded on the success attending the practice of some of the best gardeners in this country. I have had also sufficient experience to warrant me in this attempt to contribute my mite towards the "attainment of this kind of useful knowledge."

FLOWERS.

“ Whate’er has beauty, worth, or power,
 Or grace, or lustre, is a flower ;
 Wit is a flower ; and bards prepare
 The flowers of fancy for the fair ;
 Deep in the bosom dwells a flower,
 Not time shall taint, nor death devour ;
 A Flower that no rude season fears,
 And **VIRTUE** is the fruit it bears.”

Inscribed to Miss *****.

A CATALOGUE OF ANNUAL FLOWER SEEDS.

Alkekengi or Kite flower, *Atropa physaloides*.

Alyssum Sweet, *Alyssum maritimum*.

§ Amaranthas three co-

loured, *Amaranthus tricolor*.

Amethyst blue, *Amethystea coerulea*.

§ Balsamines of various

colours, *Impatiens balsamina*.

Bladder ketmia, *Hibiscus trionum*.

Blue bottle great, *Centaurea cyanus major*

Blue bottle small, *Do. cyanus minor*.

§ Browallia (blue and

white,) *Browallia elata*.

§ Cacalia scarlet, *Cacalia coccinea*.

Candytuft white and purple,

Iberis,

Do. sweet scented, *Do. odorata*.

Catch-fly, *Silene armeria*.

§ Centaurea, great American,

Centaurea Americana.

Chrysanthemam, white, yellow, and tri-co- loured	<i>Chrysanthemum coronari- um.</i>
§ Cockscomb, crimson and yellow,	<i>Celoeia cristata.</i>
* Convolvulus, dwarf,	<i>Convolvulus minor.</i>
Coreopsis Golden,	<i>Coreopsis tinctoria.</i>
Cuckolds Horn, (two sta- mined,	<i>Martynia diandria.</i>
Devil in a Bush or Love in a mist,	<i>Nigella damascena.</i>
* Evening Primrose,	<i>Oenothera grandiflora.</i>
Eternal Flower, yellow, Do. purple,	<i>Xeranthemum lucidum.</i> <i>Do. annum.</i>
Euphorbia, variegated,	<i>Euphorbia variegata.</i>
Feather, grass,	<i>Stipa pinnata.</i>
Flos adonis,	<i>Adonis miniata.</i>
§ Globe Amaranthus, purple, white and striped,	<i>Gomphrena globosa.</i>
Hawkweed, yellow do. red,	<i>Crepis barbata aurantia.</i> <i>do. rubra.</i>
* Hedge Hogs,	<i>Medicago intertexta.</i>
§ Ice Plant,	<i>Mesembryanthemum chrys- tallinum.</i>
Jacobea or Groundsell, pnurple and white,	<i>Senecio elegans and alba.</i>
Job's Tears,	<i>Coix lachryma Jobi.</i>
Larkspur, broad leaved, Do. branching and upright,	<i>Delphinium peregrinum.</i> <i>Do. consolidum.</i>

Lavatera, European,	<i>Lavatera trimestris.</i>
Love lies bleeding,	<i>Amaranthus melancholicus.</i>
* Lupins of various colours,	<i>Lupinus.</i>
Marigold, African,	<i>Tagetes erecta.</i>
Do. French,	<i>Do. patula.</i>
Marigold, starry,	<i>Calendula stellata.</i>
* Marvel of Peru, (or 4 o'clock),	<i>Mirabilis jalapa.</i>
* Mignonette (sweet scented,)	<i>Reseda odorata.</i>
Nolana trailing,	<i>Nolana prostrata.</i>
* Oats animated,	<i>Avena sensitiva.</i>
Pansey or Heart's Ease,	<i>Viola tricolor.</i>
* Poppy horned,	<i>Glaucum luteum.</i>
* Poppy officinal white,	<i>Papaver somniferum.</i>
Pentapetes scarlet,	<i>Pentapetes Phœnica.</i>
Prince's feather,	<i>Amaranthus hypocondriacus.</i>
§ Sensitive plant,	<i>Mimosa sensitiva.</i>
Sunflower, tall and dwarf,	<i>Helianthus annuus.</i>
Sweet Sultan, purple,	
white and yellow,	<i>Centaurea.</i>
* Stock Ten Week or	
giiliflower, various	
colours,	<i>Cheiranthus annuus.</i>
Touch me not,	<i>Noli me tangere.</i>
Trefoil crimson,	<i>Trifolium incarnatum.</i>
Do. sweet scented,	<i>Do. odorata.</i>
* Venus's looking glass,	<i>Campanula speculum.</i>
Venus's navel wort,	<i>Cotyledon macrophyllum.</i>
Ximenisia Mexican,	<i>Ximenisia ensalooides.</i>
Zinnia red and yellow,	<i>Zinnia.</i>

The following are climbing plants, and will require to be planted in situations where they can be supported by sticks or twine without interfering with other plants.

Balloon vine, or love in a

puff,

Cardiospermum

§ Cypress vine,

Ipomoea coccinea.

Fumitory Pink,

Fumaria fungosa.

Hyacinth Bean,

Dolichos, purp. & alba.

Morning Glory, various

colors,

Convolvulus major.

Balsam Apple and Pear,

Momordica balsamina.

Gourd, the bottle,

Cucurbita lagenaria.

Do. two coloured,

Do. bicolor.

Do. orange,

Do. aurantia.

Snake Melon,

Cucumis melo anguinis.

Sweet Peas of various

kinds and colours, *Lathyrus odoratus.*

All kinds of annual Flower Seeds may be sown in the month of April and May, on borders or beds of clean light earth, which should be previously manured with rich compost or old dung. This being incorporated well with the soil, the beds should be levelled, and the seeds sown either in small patches, each kind by itself, or in drills from 1-4 to 1-2 an inch deep, according to the size or nature of the seed. Those who would have their plants to flower early, should sow the hardy kinds the last week in March or early in April, the most tender (which are marked §) may be sown in boxes or pots of light earth at

the same time : These, if exposed to the sun every day and sheltered in cold nights, will be forwarded in growth, and be fit to transplant early in June. Those marked * may also be sown in small pots. As these plants do not well bear transplanting, they should be turned out of the pots with the balls of earth entire, and placed in the ground where they are intended to flower ; or if the seed be sown in a bed with other kinds, they should be carefully transplanted with a trowel, without disturbing the roots. The most eligible way to obtain early flowers is to prepare a slight hot bed for the tender kinds, and either to plunge the pots therein up to their rims, or to sow the seed in the earth in shallow drills not more than a quarter of an inch deep.

To prevent disappointment, I would recommend that great care be taken to keep the seed beds as clear from weeds as possible. It cannot be denied but young plants are apt to get smothered and sometimes pulled up with weeds. To obviate this, I would suggest that the seeds be sown in shallow drills, each kind by itself, and that an account be kept of the contents of each drill in a book, also of all seeds that are sown at different times, and by being particular in the dates, you may always know when to expect your plants to come up. In order that this may be rendered plain to my readers, I adopt the following plan of entry of six kinds sown in pots, and six in the open ground.

April 20, sowed flower seeds in pots :

Pot marked A, or 1, *Amaranthus tricolor*.

B, or 2, *Balsamines*,

C, or 3, *Cockscomb, crimson*.

D, or 4, *Egg Plant.*

E, or 5, *Ice Plant.*

F, or 6, *Mignonette.*

These pots may be either marked with letters or figures on the outside, to answer with the book, or notches may be cut in wood, or other labels affixed to the pots, and entered accordingly.

April 20, Sowed flower seeds in drills, as under :

No. 1, *Bladder Ketmia.*

2, *Coreopsis tinctoria.*

3, *Yellow Eternal Flower.*

4, *Globe amaranthus.*

5, *Prince's Feather.*

6, *Larkspur branching.*

If these numbers be continued to 100, or even a thousand, there can be no mistake, provided the rows are all marked according to the entry in the book ; or if No. 1 be noted, plain sticks will answer afterwards, if one be stuck at each end of every row. In this case, it would be well to leave a space every ten or twenty rows, and note the number of the rows ; by this means they can be the more easily traced.

If the book be kept by any other than the Gardener, each bag or paper of seed should be marked or numbered according to the entry in the book, and given to the Gardener with directions to sow them in the regular order.

BIENNIAL AND PERENNIAL FLOWER SEEDS.

Those marked || are Biennials.

Bee Larkspur,

Delphinium elatum.

Campion, rose,

Agrostemma coronaria.

Canterbury Bells, (blue and white,)	<i>Campanula medium.</i>
Cassia, Maryland,	<i>Cassia Marylandica.</i>
Carnation, Pink,	<i>Dianthus caryophyllus.</i>
Chinese, imperial Pink,	<i>Do. Chinensis.</i>
Clove do.	<i>Do. hortensis.</i>
Colutea, scarlet,	<i>Sutherlandia Frutescens.</i>
Clary, Purple topped,	<i>Salvia sclara.</i>
Crimson Bergamot,	<i>Monarda kalmiana.</i>
Columbine, double,	<i>Aquilegia vulgaris.</i>
Fox-glove, purple,	<i>Digitalis purpurea.</i>
do. white,	<i>do. alba.</i>
Gentian, Purple,	<i>Gentiana saponaria.</i>
Gentian, Porcelain flowered,	<i>Gentiana adscendens.</i>
Gilliflower, many sorts,	<i>Cheiranthus incanus.</i>
Globe Thistle,	<i>Echinops sphaerocephalus.</i>
Hollyhock, black Antwerp,	<i>Althea fl. nigra.</i>
Do. China of sorts,	<i>Althea Chinensis.</i>
Do. English do.	<i>Do. Anglica.</i>
Honesty, or Satin	<i>Lanaria biennis.</i>
Flower,	
Ivy Leaved Toad Flax,	<i>Linaria cymbalaria.</i>
Jacob's Ladder,	<i>Polemonium cerulcum.</i>
Lupin Perennial,	<i>Lupinus perennis.</i>
Lychnis, Dwarf Mountain,	<i>Lychnis Alpina.</i>
do. Scarlet,	<i>Do. Chalcedonica.</i>
London Pride or Maiden	<i>Dianthus deltoides.</i>
Pink,	
Monks-hood,	<i>Aconitum napellus.</i>
Monkey-Flower, Blue,	<i>Mimulus ringens.</i>
Phlox, or French Lilac,	<i>Phlox, many species.</i>
Pink, Pheasant Eyed,	<i>Dianthus plumarius.</i>

Purple perennial Flax,	<i>Linum perenne.</i>
Rudbeckia, yellow and	<i>Rudbeckia.</i>
purple,	
Sophora, white and blue,	<i>Sophora.</i>
Sun Flower, perennial,	<i>Helianthus altissimus.</i>
many flowering,	
Sweet Scabious,	<i>Scabiosa atropurpurea.</i>
Sweet Rocket.	<i>Hesperis matronalis.</i>
Sweet William,	<i>Dianthus barbatus.</i>
Sweet Chili Marigold,	<i>Tugetes lucida.</i>
Valerian Garden,	<i>Valeriana rubra.</i>
Wall Flower, Bloody,	<i>Cheiranthus cheiri.</i>
(Climbing Plants,)	
Everlasting Peas,	<i>Lathyrus latifolius.</i>
Purple Glycine,	<i>Glycine apios.</i>
Scarlet Trumpet Flower,	<i>Bignonia radicans.</i>
Sweet Virgin's Bower,	<i>Clematis flammula.</i>
'Travellers' Joy,	<i>Do. Vitis alba.</i>
Virginian Virgin's Bower,	<i>Do. Virginiana.</i>

Biennial and perennial flower seeds may be sown in the month of April, in shallow drills. If this business be performed in the manner recommended for annuals, they can be easily distinguished from each other; and as these plants do not flower the first year, they may be thinned out, or removed from the seed beds as soon as they are well rooted, and planted either into different parts of the flower beds, or in a nursery bed. If the latter plan be adopted, they should be planted in rows a foot or more apart, and kept free from weeds by means of a small hoe, which will greatly promote their growth, and prepare them for transplanting into the ground, (where they are intended to flower,) either in the autumn or early in

the ensuing spring. It may be remarked that biennials are raised principally from seed sown every year. They seldom survive the second winter to flower in perfection, unless they are renewed by cuttings of top shoots, young flower stalks, or casual root-offsets, layers, &c. It will be unnecessary to take this trouble unless it be with any extraordinary double-flowering plants. Some of the perennials may be increased by root offsets detached from the old plants, and planted in Spring or Autumn; others by bottom suckers and slips of top shoots, layers, and pipings of young shoots, &c.

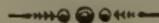
In removing plants into the beds where they are intended to flower, great pains should be taken to preserve some of the earth to the roots, and the ground should be previously brought into good condition, so that they may strike freely, and produce their flowers in perfection. The plants should be so arranged that they may all be seen. The most dwarfish may be placed in front, and others in a regular gradation to the tallest behind; or the tallest may be planted along the middle of the beds, and the others on each side according to their varied heights and colours.

Those who may be desirous of having a complete flower garden, should procure some of the different kinds of bulbous and tuberous rooted plants, such as Peonies, Hyacinths, Tulips, Narcissuses, Crown Imperials, Lillies, Jonquils, Crocuses, Snow Drops, &c. These, and all other kinds of bulbs, require a good soil, manured with old dung, and a little coarse or sea sand. The hardy kinds should be planted in October or November, from two to three or four in-

ches deep, according to their respective size and strength.

There is no part of gardening which requires so much elegance of taste and fancy, as in setting off a border or bed of intermixed flowers to advantage. In assemblage with other flowers, the different kinds of hardy bulbs may be planted in small clumps of six, seven, or eight inches in diameter, three, four, five or more roots in each, according to their size and growth, and these at suitable distances from one another. Likewise, observe to diversify the kinds and colours, so as to display when in bloom the greatest possible variety of shades and contrasts.

Flower beds should be kept free from weeds, and watered occasionally in the summer. In the autumn they should be covered with straw or light litter; this should be taken off in the spring, and the ground should be hoed and dressed in such a manner as to enliven the earth around the roots of the plants, as also to give the whole a neat appearance.



PLANTS KEPT IN ROOMS.

The many varieties of exotic plants kept in our greenhouses thrive best in a temperature and soil, similar to that in which nature first produced them; hence those who cultivate the several kinds from various climates, have to provide suitable composts and also separate departments, where the different degrees of heat are kept up according to the nature and description of the plants. The generality of those

denominated greenhouse plants, and which are kept in rooms, should be placed where they can have light and sun, without being exposed to the frost. Air, heat, and moisture are essential to the growth of plants, but these should be given in due proportions according to circumstances. In frosty weather they should be kept from the external air, and watered very sparingly. When water is necessary, it should be applied in the morning of a mild sunny day. The plants should be kept free from decayed leaves, and the earth at the top of the pots should be sometimes loosened to a moderate depth, and replenished with a portion of fresh compost. Plants kept in private houses are often killed with kindness ; the temperature of a room in the winter need not be more than ten degrees above freezing. If plants are healthy, they may be kept so by attention to the preceding hints ; unhealthiness generally arises from their being subjected to the extremes of heat, cold, or moisture, or from total neglect.

FINIS.)

ANDY HOPKINS' STANDING OVAL

BY WALTER J. HANNAH, JR.

SAN FRANCISCO

Continued from page 10 of the October issue.



ANDY HOPKINS' oval is a public garden, not a private residence, and the park-like grounds are open to the public. The grounds are the property of the San Francisco City Parks Department, and the park is named in honor of the late Senator George L. Hopkins, who was a member of the San Francisco Board of Education for many years. The park is located in the heart of the city, in the neighborhood of the Civic Center, and is a favorite place for picnics and other outdoor activities. The park is surrounded by trees and shrubs, and is a popular place for walking and jogging.

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